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CITY OF MANCHESTER

REPORT

ON THE

HEALTH OF THE CITY OF MANCHESTER

FOR 1955

BY THE

MEDICAL OFFICER OF HEALTH

Henry Blacklock & Co. Ltd., Bradshaw House, Alms Hill Road, Manchester, 8

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HEALTH DEPARTMENT,
Town Hall,
MANCHESTER, 2.
30th July, 1956.

MY LORD MAYOR, ALDERMEN AND MEMBERS OF THE CITY COUNCIL,

I have pleasure in presenting my report on the health of the City for year 1955.

Tables of vital statistics for the year are shown on pages 18 to 32.

Vital statistics

The following are the salient features of the Manchester figures:—

Population

The Registrar General estimates the civilian population for 1955 at 692 a decrease of 6,800 on 1954, and 10,882 on the census population for 1951

Marriages

The number of marriages registered during the year was 6,338, comp with 6,217 the previous year. The marriage rate was 18·31 as against 17·7

Births

Registered live births numbered 11,704 (6,122 Males, 5,582 fema giving a rate of 16·91 per 1,000 population compared with 16·94 in 1954, a crease of 0·03. The rate for England and Wales was 15·0, a decrease o on the previous year.

Of the 11,704 births, 10,879 (5,707 males, 5,172 females) were legiti and 825 (415 males, 410 females) were illegitimate, the ratio of illegitimat legitimate being 1 to 14. The percentage of illegitimate births was 7·05, w is a decrease of 0·35 on 1954.

There were 318 stillbirths (164 males, 154 females) giving a rate of 2 per 1,000 total births which is 5·35 lower than the rate for 1954. The rati registered " still " to registered " live " births was 1 to 37. The rate for Eng and Wales was 23.1, a decrease of 0.4

The percentage of total births in institutions was 63·01.

Deaths

The number of deaths allocated to the City during the year was 8 (4,437 males and 4,340 females); a ratio to the population of 1 in 79 or a d rate per 1,000 of the population of 12·68 as compared with 12·20 for and an average of 12·65 for the previous five years. The rate for England Wales for 1955 was 11·7.

Deaths from all forms of tuberculosis numbered 144, the lowest recorded for the City. Respiratory tuberculosis accounted for 130 deaths other forms of tuberculosis for 14 deaths compared with 188 and 21 respecti in 1954.

There were 1,580 deaths from all forms of cancer as against 1,568 for 1 an increase of 12. The percentage of deaths of persons over 65 years was whilst that for 1954 was 48·8, an increase of 2·8 per cent.

Deaths from cancer of the lung and bronchus numbered 391 (328 male and male) being 14 less than 1954 when there were 405 (356 male and 49 female), rease in male and an increase in female deaths. The percentage of deaths 65 years was 37·9 as against 45·5 for 1954, showing a decrease of 7·6 per

t mortality

Deaths of infants under one year of age registered during 1955 numbered This was a decrease of 17 on the figure for the previous year and gives a of 28·37 per 1,000 live births, 1·10 lower than for 1954. This is again the st infant mortality rate recorded for the City. The rate for England and s was 24·9.

The number of neo-natal deaths was 215, giving a rate of 18·37 per 1,000 irths as against 237 deaths and a rate of 20·01 in 1954. This is the lowest atal death rate ever recorded for the City.

rnal mortality

There were 4 deaths from puerperal and post abortive sepsis during 1954. number of deaths from all maternal causes was 9, giving a rate of 0·75 ,000 total births compared with 0·49 for the previous year. The rate for nd and Wales was 0·64, a decrease of 0·05 on the previous year.

icipal wards

The ward statistics for the year are now based on the revised ward structure h became operative during 1954.

emiology

theria

One case of diphtheria was notified during the year—a boy aged 4 years had been admitted into a general hospital as a suspected case of pneumonia. eveloped palatal paresis and was finally diagnosed as suffering from heria. Two months prior to removal to hospital the family resided in wickshire where the patient received an incomplete course of diphtheria nization.

myelitis

Twenty-nine cases of poliomyelitis were confirmed in 1955, and one occurred, compared with 13 cases and one death in 1954.

an measles

8,268 cases of German measles were notified during the year, the highest ecorded; the previous highest occurred in 1952 when there were 8,010

les

The maximum incidence of the 6,514 cases of measles notified occurred e first three months of the year when 5,087 were notified, or 78 per cent. e total cases.

ping cough

The 1,106 cases notified in 1955 was the lowest number since 1942 when cases occurred.

Dysentery

There was an increase in the incidence of dysentery—1,178 notifi otherwise ascertained, which is the highest recorded since 1950, when 566 were recorded.

Mental Health Service

The activities of this branch of the local health authority's work con to expand and authority has been given for an increase in staff by the app ment of an additional mental health visitor and two trainee duly autho officers. These workers will receive training under the guidance of experi officers of the Mental Health Service, but it is apparent that a great need for a national scheme of training for mental health workers.

The establishment of a nucleus Adult Centre for male mental defe is proving most successful and its effectiveness in the training of these h capped persons is reflected in the improved behaviour of problem cases an general keenness of the pupils in the activities of the centre.

Housing conditions

In accordance with the Housing Repairs and Rents Act, 1954, the Council's slum clearance programme for the first five years was submitted t Ministry of Housing and Local Government. This provides for the demo of 7,500 houses and the acquisition and patching of 7,000 houses.

The first local public inquiry since the commencement of the operati the Housing Repairs and Rents Act, 1954, with its amendments to the prin Act, was held in respect of 410 houses in the St. George's area. The originally included 503 houses at the time of representation but structu dangerous conditions arising in 93 houses necessitated their demo irrespective of the anticipated confirmation of the Order by the Ministry increasing number of unfit houses became so structurally dangerous necessitate prompt rehousing of the occupants and demolition of the prop

An area of 269 houses in Harpurhey was represented as a clearanc and is to be dealt with by compulsory purchase.

Food Supply

Amendment of the law of Food and Drugs culminated in the Food Drugs Act, 1955, with the operative date of 1st January, 1956, and th awaited Food Hygiene Regulations which became fully operative in July, These regulations, produced after much controversy, offer extensive mean ensuring the compulsory cleanliness of persons, premises and equipment.

Air pollution

As a natural development of the City Council's policy, the initial ce smokeless area was expanded to make a central smokeless zone of 412 a whilst five other smaller areas also became smokeless zones.

The Clean Air Act, implementing the recommendations of the Go ment's Committee on air pollution, is the first comprehensive measur combating smoke pollution of the atmosphere from both industrial domestic sources. But it contains so many reservations, exceptions exemptions that doubt as to the fulfilment of its intention cannot be ent avoided.

Special investigations continue with the object of effective action by the
rtment and H.M. Alkali, etc., Works Inspector against the chemical
tion of the atmosphere in the Miles Platting area. One large company is
lling new treatment plant at a scheduled works following representations
by H.M. Inspector as an outcome of the observations of the Department.

Much of the Annual Report is based on figures supplied by the Registrar
ral and these are not available until the month of April following the end
e year concerned. Normally this Report is presented to the Council in
onth of July; the delay this year, which is regretted, is entirely due to the
cupations of the senior medical and non-medical staff in relation to,
, poliomyelitis vaccination and, secondly, to the outbreak of polio-
tis in Manchester in 1956.

I have pleasure in again recording my grateful thanks to the Chairman and
members of the Health Committee for their support, co-operation and
ragement during the year.

I have the honour to be,

My Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

CHARLES METCALFE BROWN,
Medical Officer of Health.

HEALTH COMMITTEE

1955-56

CHAIRMAN—Alderman W. Chadwick, M.B., CH.B.

DEPUTY CHAIRMAN—Councillor J. Conway

THE LORD MAYOR—Alderman T. F. Regan, J.P.

Alderman Hannah Baldwin, J.P.
,, J. E. Burgess
,, T. M. Larrad, J.P. (died 22.12.55)
,, W. Onions, M.B.E., J.P.
,, F. E. Tylecote, J.P., M.D., F.R.C.P.
,, T. Walker, J.P.
Councillor Nellie Beer, J.P.
,, J. Bowes
,, P. Chadwick, J.P.
,, B. Conlan
,, Eveline Hill, J.P., M.P.

Councillor H. Jenkins (from 1.
,, Mary Knight
,, B. Lawson
,, T. Lomas
,, J. McGrath
,, H. Pigott, M.B., B.C
,, W. Sharp
,, Winifred Smith
,, Lily Thomas, J.P.
,, R. E. Thomas, J.P.
,, Mabel S. Whittaker

SUB-COMMITTEES

The following sub-committees are appointed to carry out certain of the
ies referred to the Health Committee; these are particularized below.
th the exception of those of the Sanitary Defects Sub-committee, their
ceedings are subject to approval by the Health Committee.

itary

Sanitation and buildings; nuisance and offensive trades; common lodging-
ses and houses let-in-lodgings; factories; workplaces and shops; provisions
rding food and drugs; poisons and pharmacy; public conveniences; the
nting of certificates of disrepair and reports to owners under the Housing
airs and Rents Act, 1954; the Rag Flock and Other Filling Materials Act,
1; the Shops Act, 1950, and the Young Persons (Employment) Act, 1938;
abatement of smoke nuisances and atmospheric pollution; hairdressers
stration; street traders and persons trading in food on open sites; and all
stions relating to the management and administration of the Sanitary
vices Division with the exception of those relating to the appointment of
, salaries, wages and conditions of service of officers and servants.

itary Defects

To this Sub-committee are delegated under Section 273 of the Public Health
1936, the Health Committee's powers to deal with urgent cases of sanitary
cts in premises and it is empowered to authorize the service of notices
n owners, occupiers or other persons responsible requiring them, within
period specified in the notices, to execute the works required and, in the
t of the notices not being complied with, to instruct the Medical Officer
lealth to carry out the work required and/or to instruct the Town Clerk to
tute the necessary summary proceedings.

ernity and Child Welfare

Maternity and child welfare, including all the duties in the proposals of
City Council under the National Health Service Acts, relating to midwifery,
th visiting, care of mothers and young children (excepting the portion
ing to the management of Knowle House), home nursing, prevention of
ss, care and after-care and home helps; the cleansing of persons
ted with vermin; the control and management of day nurseries; and the
inistration of the Nursing Services Division with the exception of questions
ing to the appointment of staff, salaries, wages and conditions of service
fficers and servants.

lth Centres

All matters relating to the planning, siting, erection and equipment of
h centres, and to undertake, as and when they are erected, the control
management of health centres in the City with the exception of questions
ing to the appointment of staff, salaries, wages and conditions of service
fficers and servants.

tal Health

All matters arising out of the proposals of the City Council under the
nal Health Service Acts concerning mental health with the exception of
tions relating to the appointment of staff, salaries, wages and conditions
rvice of officers and servants.

Ambulance and Transport

All matters relating to the control and management of ambulances ambulance stations, passenger cars and other vehicles and garages, with exception of questions relating to the appointment of staff, salaries, wages conditions of service of officers and servants.

Residential Homes

All matters relating to the control and management of Dr. Garrett Mem Home, Knowle House, Langho Colony, Ashton House and Walton Ho with the exception of questions relating to the appointment of staff, sala wages and conditions of service of officers and servants, and the purchas bulk supplies.

Staff

All questions affecting the appointment of staff, salaries, wages and condit of service of officers and servants in the employ of the Health Committee.

Supplies

The purchase of bulk supplies of articles required by Langho Col Dr. Garrett Memorial Home, Knowle House, Ashton House, Walton H and the day nurseries, and those required by the Children's, Education Welfare Services Committees for use at residential institutions under t control.

Annual Estimates

This Sub-committee considers the whole of the draft annual estimates the Health Committee, including all items of special works, and submits recommendations to the Health Committee.

HEALTH OFFICERS

(A) Medical

Metcalfe Brown, M.D., D.P.H., rrister-at-Law	Medical Officer of Health and Principal School Medical Officer
M. M. Grierson, O.B.E., M.D., P.H., F.R.S.E.	Deputy Medical Officer of Health
Griffiths, B.SC., M.R.C.S., .C.P., D.P.H.	Senior Medical Officer—Administrative
I. Burke, M.B., CH.B., D.P.H.	Senior Medical Officer—Nursing Services
. Greenberg, M.B., M.R.C.P.	Consultant Chest Physician—Part-time

(B) Other professional

raham, F.S.I.A., M.R.SAN.I.	Chief Sanitary Inspector
d N. Leather, B.SC., F.R.I.C.	Public Analyst

(C) Lay

. Hay, M.B.E.	Chief Administrative Assistant—Nursing Services Division
. Wilkinson	Chief Administrative Assistant—General Services Division

Number of staff employed in the Health Department in December, 1955

(part-time staff expressed as the whole-time equivalent)

Type of staff		Number employed
Administrative medical officers		4
Clinical medical officers		15
Analytical chemists and laboratory assistants		7
Nursing staffs:—		
Health visiting	125	
Midwifery	61	
Day nurseries	288	
Residential homes	97	
Other	6	
	—	577
Medical auxiliaries		8
Teachers		4
Social workers		9
Occupational centre supervisors and assistants		19
Sanitary inspectors and trainee sanitary inspectors		65
Administrative and clerical staff		149
Ambulance control room staff		12
Storekeepers and assistants		5
Supervisors—public conveniences service		2
Operational staff, manual workers, etc.:—		
Ambulance and transport service	166	
Public conveniences service	75	
Domestic staff in day nurseries	73	
Domestic staff in residential homes	78	
Home helps	82	
Domestic staff in municipal hostels	65	
Rodent operatives	28	
Others	47	
	—	614
Total		1,490

The following staffs were employed on an agency basis, and are not included above:-

89 district nurses and 3 district midwives employed by the Manchester District Nu Institution.

11 district midwives employed by St. Mary's Hospitals extern service.

ral Services Division

GENERAL STATISTICS

METEOROLOGY

VITAL STATISTICS

REGISTRAR GENERAL'S ABSTRACT

INFECTIOUS DISEASES

FOOD POISONING

EPIDEMIOLOGY

GENERAL MEDICAL SERVICES

MENTAL HEALTH

HEALTH EDUCATION

AMBULANCE SERVICE

HOSPITAL CAR SERVICE

MUNICIPAL CAR POOL

DISINFECTION

RESIDENTIAL HOMES:
  Langho Colony for sane epileptics
  Dr. Garrett Memorial Home for convalescent children

MUNICIPAL HOSTELS:
  Ashton House for women
  Walton House for men

GENERAL STATISTICS

Registrar General's estimated population mid-year, 1955

Males 326,226
Females 365,974 692,

Census population, 1951 .. Males 331,355
Females 371,727 703,

Live births		Males	Females	Total	
	Legitimate ..	5,707	5,172	10,879	
	Illegitimate ..	415	410	825	 11,

Live birth rate per 1,000 of population 16

Still-births		Males	Females	Total	
	Legitimate ..	149	142	291	
	Illegitimate ..	15	12	27	.. ..

Still-birth rate per 1,000 total births (live and still) 26

Deaths .. .. Males 4,437
Females 4,340 8,

Death rate per 1,000 of population Males .. 13·60
Females 11·86 12

Comparability factor .. .. Births 0
Deaths 1

Birth rate as adjusted by factor 16

Death rate as adjusted by factor 14

Excess of births over deaths.. 2,

Percentage of mortality occurring in institutions 48

Maternal mortality :—

	Deaths.	Rate per 1,000 Total births	
Sepsis of pregnancy and abortion	4	0·33	
Other maternal causes..	5	0·42	 0

Deaths of infants under one year of age:—

All infants	332—rate per 1,000 live births	28·
Legitimate infants	312—rate per 1,000 legitimate live births ..	28·
Illegitimate infants	20—rate per 1,000 illegitimate live births ..	24·

City of Manchester.

MUNICIPAL WARDS

1955

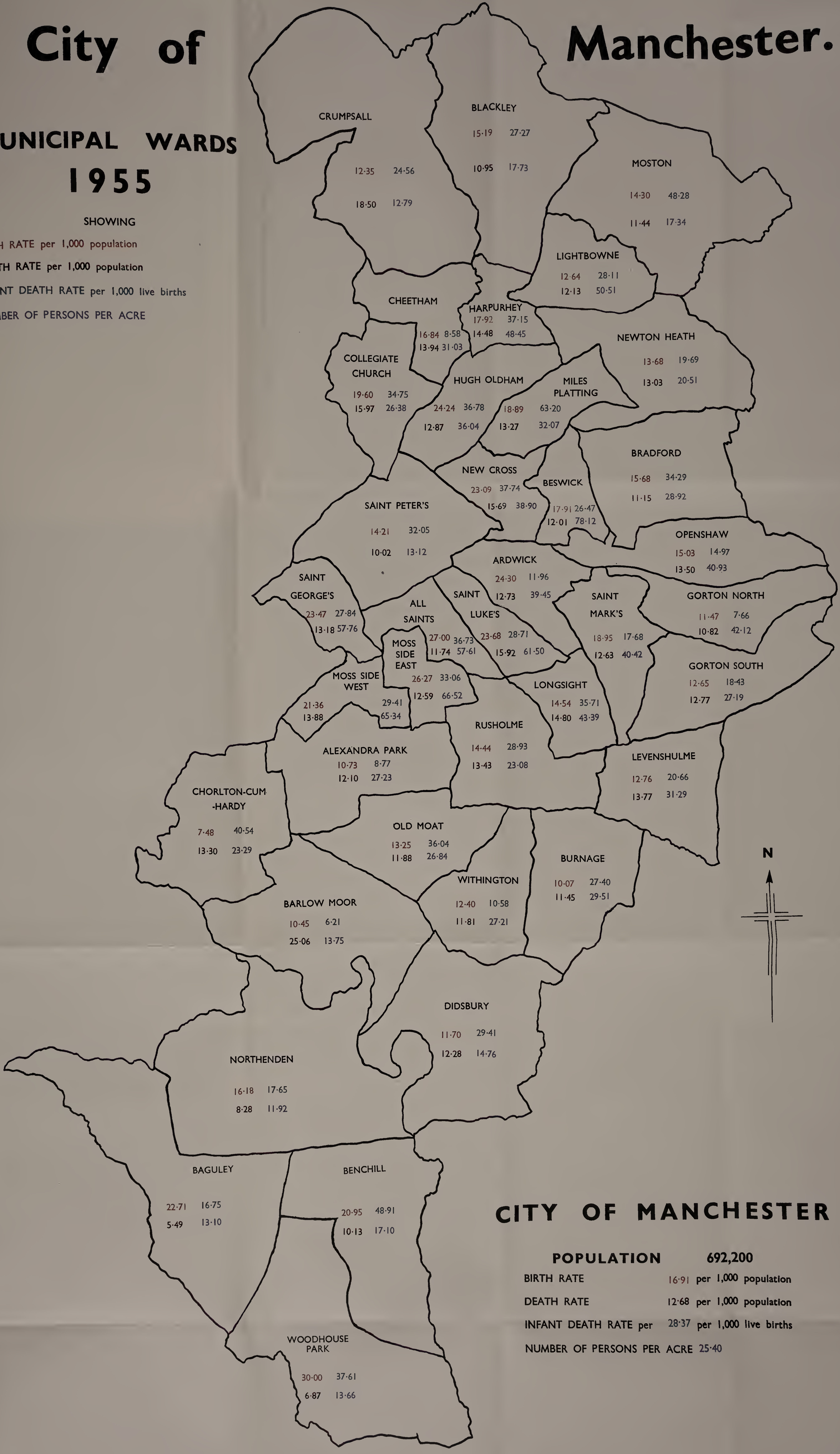
SHOWING

BIRTH RATE per 1,000 population

DEATH RATE per 1,000 population

INFANT DEATH RATE per 1,000 live births

NUMBER OF PERSONS PER ACRE



CITY OF MANCHESTER

POPULATION	**692,200**
BIRTH RATE	16·91 per 1,000 population
DEATH RATE	12·68 per 1,000 population
INFANT DEATH RATE per	28·37 per 1,000 live births
NUMBER OF PERSONS PER ACRE	25·40

mber of persons married per 1,000 of population		18·31
a of the City in acres		27,255
mber of persons per acre		25
mber of occupied structurally separate dwellings at Census 1951		201,027
mber of persons per occupied structurally separate dwelling at Census 1951		3·50
mber of houses according to Rate Book (1st April, 1955)		200,227
mber of persons per house		3·46
eable value (1st April, 1955)		£6,825,753
m represented by a penny rate (estimated)		£27,200
Number of new houses erected during 1955 :		
By local authority	1,962	
By other bodies or persons	443	
		2,405

METEOROLOGY

Extracts from readings taken at the Whitworth Observatory, Manchester.

	Wet bulb	Dry bulb	Mean maximum temperature	Mean minimum temperature	Mean temperature	Total rainfall (inches)	Total number of wet days	Total hours of sunshine	Number of days on which fog was noted at
January	36·1	37·5	41·5	34·0	37·7	2·19	12	18·60	10
February	32·7	34·7	39·7	31·2	35·5	1·59	8	55·44	5
March	35·7	38·3	45·0	33·0	39·0	2·02	7	103·54	7
April	45·8	48·9	56·3	42·2	49·3	2·07	10	116·40	8
May	45·7	49·9	56·5	43·2	49·9	2·64	14	156·86	0
June	51·9	56·8	64·3	50·2	57·3	3·05	16	134·40	1
July	59·3	65·3	75·1	56·3	65·7	0·92	3	247·38	1
August	59·7	64·9	74·9	56·9	65·9	1·06	5	178·87	0
September	54·1	57·5	64·7	51·3	58·0	2·24	18	139·80	7
October	45·7	48·2	56·4	41·7	49·0	1·81	16	80·60	3
November	42·9	44·9	50·3	41·5	45·9	1·53	13	24·60	11
December	40·7	42·3	47·7	38·2	42·9	4·94	16	15·50	3
YEAR ..	45·9	49·1	56·0	43·3	49·7	26·06	138	1271·99	56
	Means					Totals			

Extracts from readings taken at Manchester Airport, Ringway.

	Wet bulb	Dry bulb	Mean maximum temperature	Mean minimum temperature	Mean temperature	Total rainfall (inches)	Total number of wet days	Total hours of sunshine	Number of days on which fog was noted at 09.00 G.M.T.
ary	35·4	37·1	40·7	32·9	36·8	2·21	12	31.31	1
uary	32·1	33·9	38·9	28·7	33·8	2·04	9	66·92	1
ch	35·8	37·9	44·4	31·1	37·7	1·82	7	145·08	1
l	45·2	48·3	56·5	40·8	48·7	1·90	12	145·20	1
. . . . . .	44·8	48·7	56·2	41·7	48·9	2·58	13	196·54	0
. . . . . .	51·8	56·1	63·8	49·0	56·4	3·13	13	153·30	0
. . . . . .	57·2	64·0	74·5	53·8	64·1	0·75	3	279·62	0
ust	58·9	64·3	74·4	55·6	65·0	1·00	5	200·57	0
ember	53·3	57·1	64·7	50·3	57·5	1·89	11	133·20	0
ber	45·4	48·2	56·0	41·2	48·6	2·12	10	107·26	1
ember	42·6	44·6	49·6	40·1	44·9	1·53	8	49·80	6
ember	40·0	42·0	45·9	37·8	41·9	3·35	18	34·10	1
YEAR . .	45·2	48·5	55·5	41·9	48·7	24·32	121	1542·90	12
	Means					Totals			

VITAL STATISTICS

Causes of death

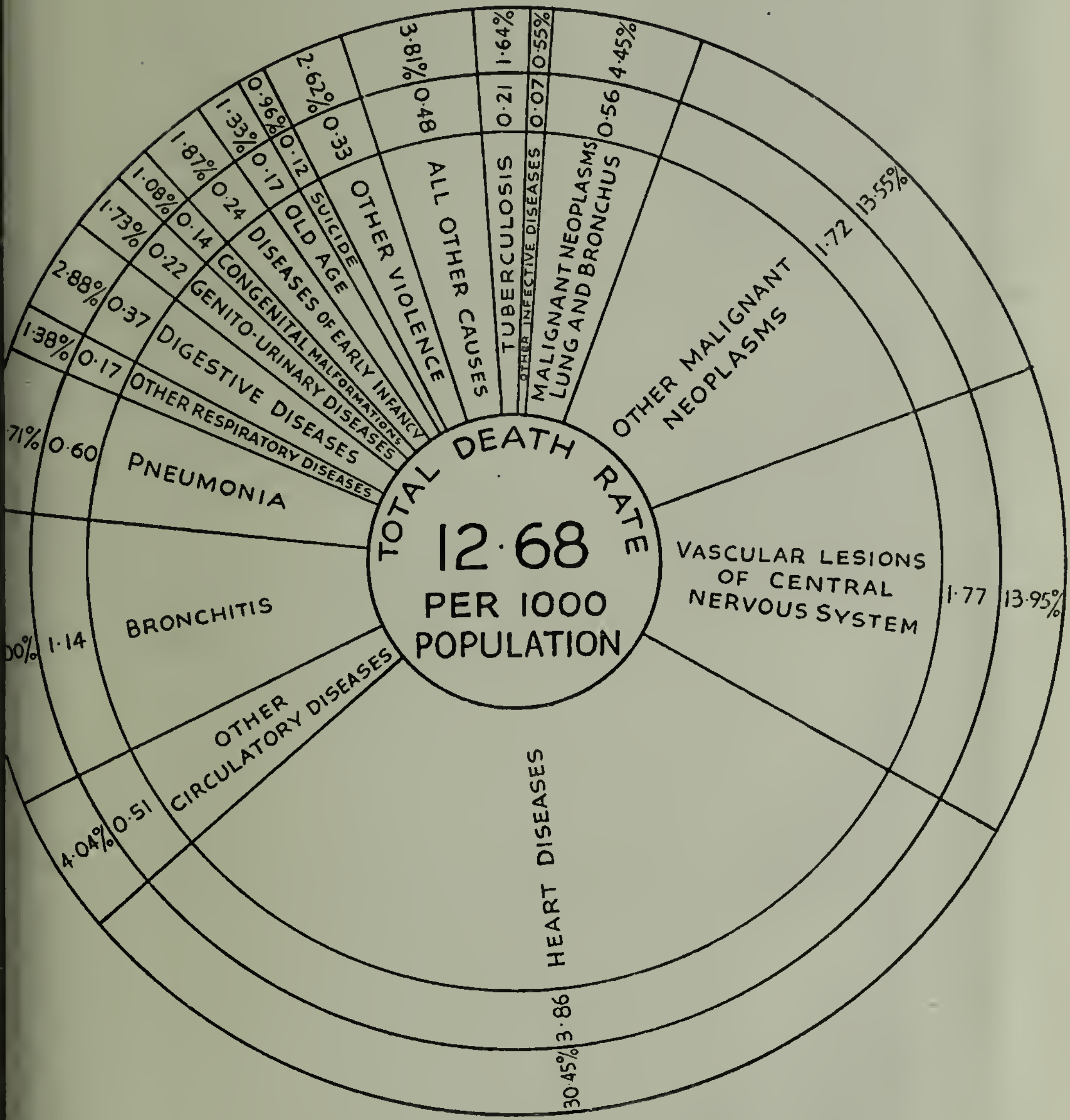
Registrar General's Return
Manchester

Causes of death				Ages at death						
	Male	Female	All ages	0–	1–	5–	15–	25–	45–	65–
Tuberculosis, respiratory	86	44	130	—	—	—	4	39	55	26
,, other	5	9	14	—	4	1	3	1	1	—
Syphilitic disease	12	8	20	—	—	—	—	2	7	10
Diphtheria	—	—	—	—	—	—	—	—	—	—
Whooping cough	1	1	2	2	—	—	—	—	—	—
Meningococcal infections	3	—	3	3	—	—	—	—	—	—
Acute poliomyelitis	1	—	1	—	—	1	—	—	—	—
Measles	—	2	2	—	2	—	—	—	—	—
Other infective and parasitic diseases	8	12	20	—	4	1	2	5	5	2
Malignant neoplasm, stomach	135	128	263	—	—	—	—	9	89	110
,, ,, lung, broncbus	328	63	391	—	—	—	—	20	223	107
,, ,, breast	—	127	127	—	—	—	—	10	69	27
,, ,, uterus	—	79	79	—	—	—	—	5	33	25
Other malignant and lymphatic neoplasms	354	326	680	—	2	7	4	37	228	244
Leukaemia, aleukaemia	22	18	40	—	5	6	—	5	12	7
Diabetes	14	35	49	—	—	—	—	3	9	19
Vascular lesions of central nervous system	494	730	1224	—	—	—	—	25	237	385
Coronary disease, angina	653	346	999	—	—	—	1	38	355	335
Hypertension with heart disease ..	65	133	198	—	—	—	—	4	35	75
Other heart disease	590	886	1476	—	—	—	6	50	225	356
Other circulatory disease	155	200	355	—	—	1	—	10	54	97
Influenza	13	21	34	—	—	—	1	—	9	5
Pneumonia	223	201	424	53	4	3	—	9	81	112
Bronchitis..	526	264	790	9	2	2	—	13	225	304
Other diseases of respiratory system ..	55	32	87	3	1	—	1	7	28	26
Ulcer of stomacb and duodenum ..	54	38	92	—	—	—	2	5	25	31
Gastritis, enteritis and diarrhoea ..	12	16	28	9	—	—	—	1	10	5
Nephritis and nephrosis	32	40	72	—	—	1	3	14	24	17
Hyperplasia of prostate	31	—	31	—	—	—	—	—	3	10
Pregnancy, childbirth, abortion	—	9	9	—	—	—	3	6	—	—
Congenital malformations	47	48	95	72	6	2	2	5	6	1
Other defined and ill-defined diseases ..	314	414	728	174	3	8	3	48	139	137
Motor vehicle accidents	74	30	104	—	8	8	9	27	20	14
All other accidents	69	50	119	7	9	12	3	17	31	22
Suicide	55	29	84	—	—	—	3	18	40	15
Homicide and operations of war ..	6	1	7	—	1	—	—	3	2	1
TOTALS ..	4437	4340	8777	332	51	53	50	436	2280	2525

NOTE.—A table showing the mortality rates due to various causes, etc., from onwards appears at page 32A.

DEATHS FROM PRINCIPAL CAUSES

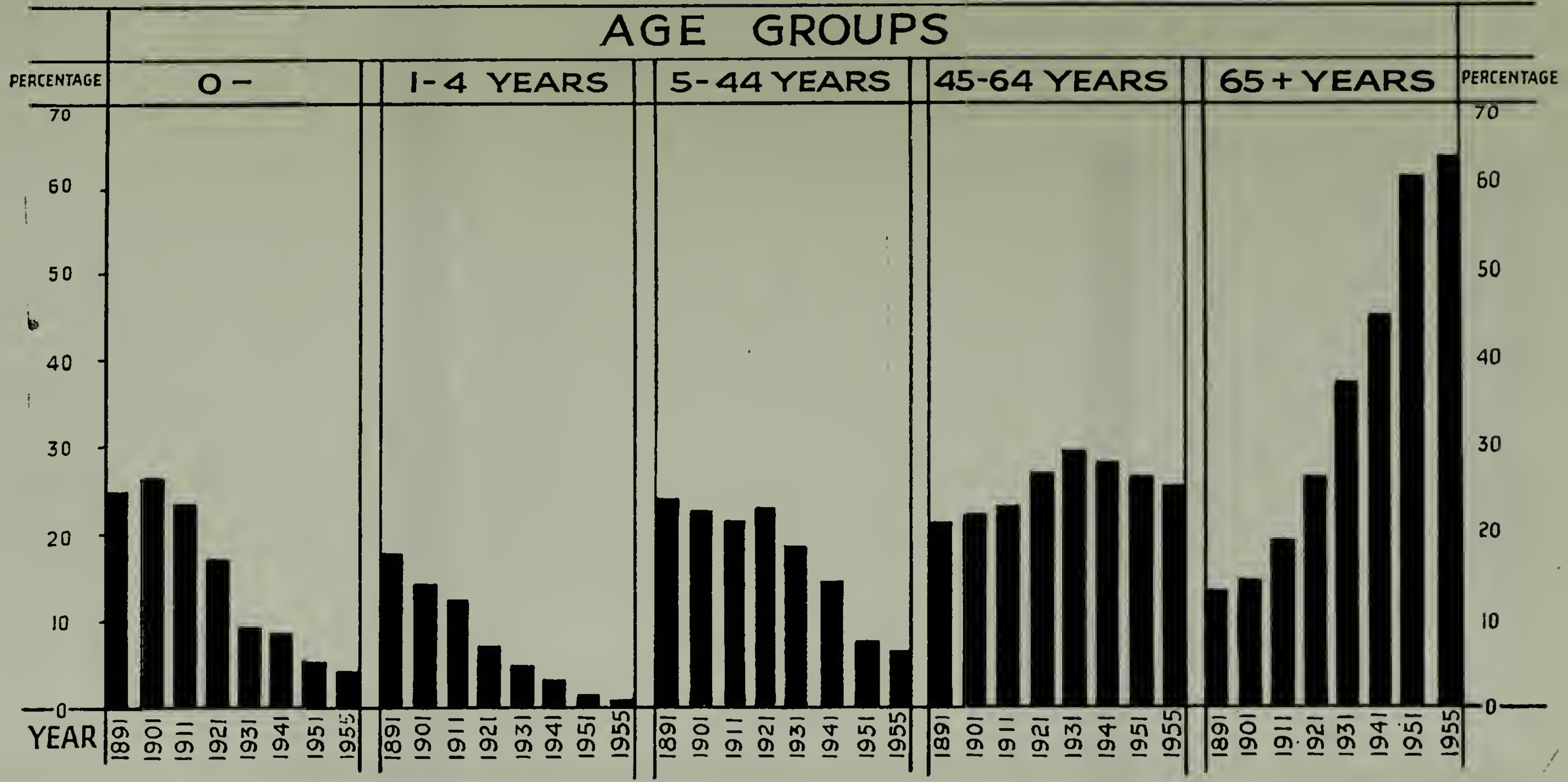
RATE PER 1000 POPULATION
AND
PERCENTAGE TO TOTAL DEATHS



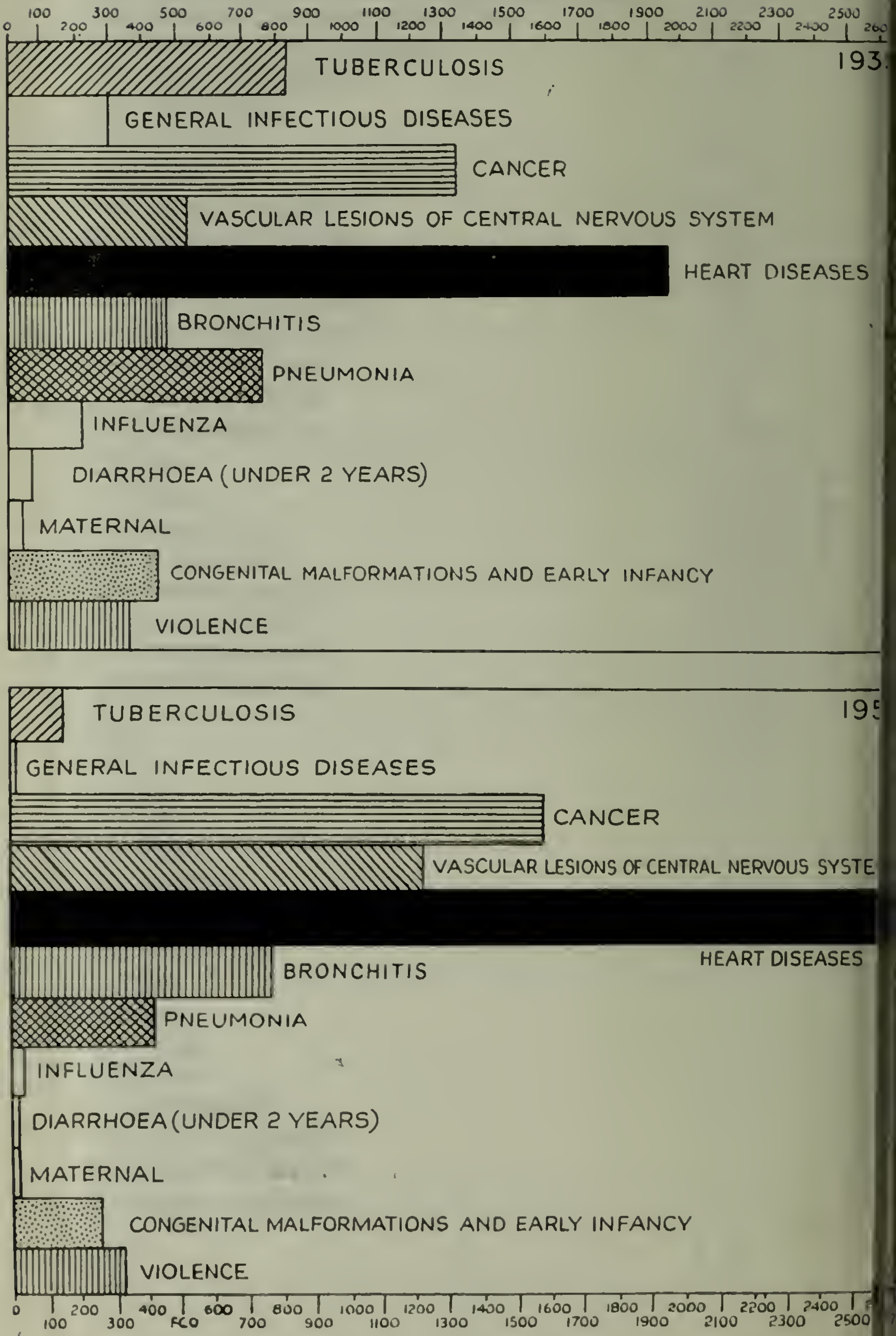
Deaths in age groups and percentages to total deaths

Year	Total number of deaths	Age groups and percentages								
		0—		1—4		5—44		45—64		65–
		No.	%	No.	%	No.	%	No.	%	No.
1891 ..	13,202	3,299	24·99	2,225	16·85	3,178	24·07	2,756	20·88	1,744
1901 ..	11,801	3,114	26·39	1,676	14·20	2,725	23·09	2,627	22·26	1,659
1911 ..	12,272	2,901	23·64	1,516	12·35	2,711	22·09	2,790	22·74	2,354
1921 ..	10,093	1,707	16·91	728	7·21	2,313	22·92	2,687	26·62	2,658
1931 ..	10,618	1,027	9·67	503	4·74	1,943	18·30	3,144	29·61	4,001
1941 ..	10,016	832	8·31	265	2·65	1,467	14·65	2,886	28·81	4,566
1951 ..	9,676	439	4·54	64	0·66	748	7·73	2,568	26·54	5,857
1952 ..	8,576	424	4·94	75	0·87	637	7·43	2,410	28·10	5,030
1953 ..	8,638	373	4·32	58	0·67	602	6·97	2,349	27·19	5,256
1954 ..	8,525	349	4·09	56	0·66	585	6·86	2,293	26·90	5,242
1955 ..	8,777	332	3·78	51	0·58	539	6·14	2,280	25·98	5,575

PERCENTAGES OF DEATHS IN VARIOUS AGE GROUPS TO TOTAL DEATHS
1891 – 1955



PRINCIPAL CAUSES OF DEATH
1935 AND 1955



causes, and (c) infant mortality; also the percentages to total deaths of inquest cases and deaths in public institutions; in quinquennial periods, 1871—1955.

Quinquennial average

Year	Estimated population (Mean)	Marriage Rate per 1,000 persons living	Rates per 1,000 persons living												Percentage to total deaths		Infant mortality	Year
			Births	Deaths (all causes)	Smallpox	Measles	Scarlet fever	Diphtheria	Whooping cough	Typhus fever	Typhoid and paratyphoid fever	Simple continued fever	Diarrhoea 4 weeks to 2 years	Violence	Inquest cases	Deaths in public institutions		
1871–1875	477,344	24·6	38·9	28·3	0·26	0·64	1·08	0·08	0·78	0·14	0·43	0·21	1·95	0·94	7·2	13·4	198	1871–1875
1876–1880	509,802	18·6	38·7	26·2	0·24	0·53	1·07	0·13	0·84	0·08	0·29	0·11	1·26	0·89	7·5	14·3	172	1876–1880
1881–1885	542,746	17·9	35·1	23·6	0·04	0·71	0·48	0·10	0·68	0·05	0·20	0·03	0·99	0·72	7·0	15·9	175	1881–1885
1886–1890	575,630	16·6	33·4	24·6	0·02	0·83	0·50	0·32	0·54	0·02	0·30	0·01	1·08	0·78	6·9	17·7	183	1886–1890
1891–1895	517,801	16·9	33·2	23·6	0·03	0·62	0·26	0·27	0·64	0·00	0·24	0·01	1·19	0·77	7·1	19·2	186	1891–1895
1896–1900	539,599	18·2	32·5	22·7	..	0·89	0·20	0·13	0·53	0·00	0·18	0·01	1·69	0·73	7·1	20·2	192	1896–1900
1901–1905	554,355	17·4	30·9	20·1	0·01	0·55	0·19	0·22	0·41	0·00	0·13	0·00	1·15	0·72	7·1	24·4	173	1901–1905
1906–1910	660,049	17·0	28·1	17·7	..	0·54	0·16	0·17	0·37	0·00	0·10	0·00	0·76	0·68	7·4	27·3	147	1906–1910
1911–1915	720,565	17·9	25·3	16·5	..	0·51	0·12	0·14	0·26	..	0·06	..	0·83	0·66	7·4	29·2	133	1911–1915
1916–1920	B 746,909 D 699,325	18·4	19·9	15·7	..	0·28	0·04	0·08	0·24	..	0·02	0·00	0·33	0·55	6·3	29·7	105	1916–1920
1921–1925	751,080	16·8	20·6	13·9	..	0·25	0·07	0·10	0·21	..	0·01	..	0·31	0·45	5·7	37·4	96	1921–1925
1926–1930	752,840	16·6	17·5	13·9	..	0·18	0·02	0·11	0·14	..	0·01	..	0·29	0·50	4·8	42·8	88	1926–1930
1931–1935	759,180	17·1	15·3	13·4	..	0·11	0·02	0·10	0·08	..	0·00	..	0·15	0·54	4·8	48.3	77	1931–1935
1936–1940	712,660	21·4	15·2	14·3	..	0·07	0·00	0·09	0·04	..	0·00	..	0·10	0·70	4·9	52·0	71	1936–1940
1941–1945	608,256	20·9	18·1	15·0	..	0·02	0·00	0·04	0·06	..	0·00	..	0·15	0·68	5·1	50·7	64	1941–1945
1946–1950	690,264	20·2	20·1	13·1	..	0·01	..	0·00	0·04	..	0·00	..	0·16	0·40	3·6	45·3	48	1946–1950
1951–1955	699,660	18·3	17·3	12·6	..	0·00	0·00	0·00	0·01	..	..	..	0·02	0·43	3·7	46·0	31	1951–1955

The populations and rates prior to 1891 are those for the Unions of Manchester, Chorlton, and Prestwich, which have been taken as approximately representing "Manchester." The City was extended to include Moss Side and Withington in November, 1904, Gorton and Levenshulme in November, 1909, and Wythenshawe in April, 1931.

From 1911 population and rates based on Registrar-General's returns.

(B)—Population for calculating birth-rates.
(D)—Population for calculating death-rates.
..—Signifies there were no deaths.

Ward population, area, density, births and deaths, with birth, death, and infant mortality rates
(*Figures compiled in the Health Department*)

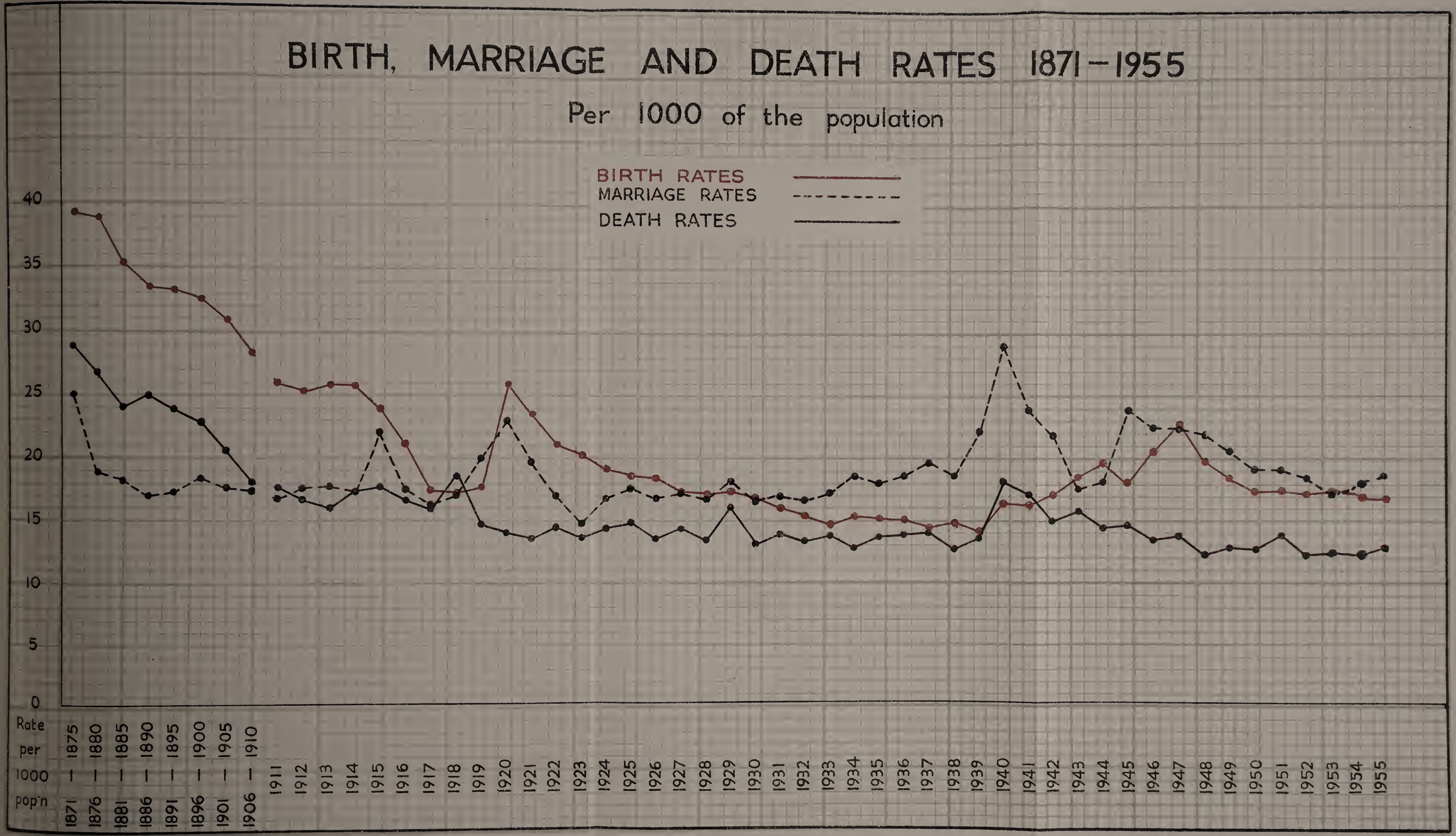
Wards	Estimated population	Area in acres	Persons per acre	Live births		Deaths		Natural rate of increase	Deaths under 1 year per 1,000 live births
				Total	Rate per 1,000 pop.	Total	Rate per 1,000 pop.		
City of Manchester ..	692200	27255	25·40	11704	16·91	8774	12·68	+ 4·23	28·37
Alexandra Park	21242	780	27·23	228	10·73	257	12·10	— 1·37	8·77
All Saints	18146	315	57·61	490	27·00	213	11·74	+ 15·26	36·73
Ardwick	17201	436	39·45	418	24·30	219	12·73	+ 11·57	11·96
Baguley	18402	1405	13·10	418	22·71	101	5·49	+ 17·22	16·75
Barlow Moor	15404	1120	13·75	161	10·45	386	25·06	— 14·61	6·21
Benchill	17566	1027	17·10	368	20·95	178	10·13	+ 10·82	48·91
Beswick..	18982	243	78·12	340	17·91	228	12·01	+ 5·90	26·47
Blackley	21731	1226	17·73	330	15·19	238	10·95	+ 4·24	27·27
Bradford	22326	772	28·92	350	15·68	249	11·15	+ 4·53	34·29
Burnage	21746	737	29·51	219	10·07	249	11·45	— 1·38	27·40
Cheetham	13840	446	31·03	233	16·84	193	13·94	+ 2·90	8·58
Chorlton-cum-Hardy	19774	849	23·29	148	7·48	263	13·30	— 5·82	40·54
Collegiate Church	13215	501	26·38	259	19·60	211	15·97	+ 3·63	34·75
Crumpsall	23078	1805	12·79	285	12·35	427	18·50	— 6·15	24·56
Didsbury	17431	1181	14·76	204	11·70	214	12·28	— 0·58	29·41
Gorton North	22746	540	42·12	261	11·47	246	10·82	+ 0·65	7·66
Gorton South	17156	631	27·19	217	12·65	219	12·77	— 0·12	18·43
Harpurhey	18023	372	48·45	323	17·92	261	14·48	+ 3·44	37·15
Hugh Oldham	17949	498	36·04	435	24·24	231	12·87	+ 11·37	36·78
Levenshulme	18959	606	31·29	242	12·76	261	13·77	— 1·01	20·66
Lightbowne	19699	390	50·51	249	12·64	239	12·13	+ 0·51	28·11
Longsight	15404	355	43·39	224	14·54	228	14·80	— 0·26	35·71
Miles Platting	14241	444	32·07	269	18·89	189	13·27	+ 5·62	63·20
Moss Side East	18425	277	66·52	484	26·27	232	12·59	+ 13·68	33·06
Moss Side West	17512	268	65·34	374	21·36	243	13·88	+ 7·48	29·41
Moston	20283	1170	17·34	290	14·30	232	11·44	+ 2·86	48·28
New Cross	13771	354	38·90	318	23·09	216	15·69	+ 7·40	37·74
Newton Heath	18566	905	20·51	254	13·68	242	13·03	+ 0·65	19·69
Northenden	21020	1763	11·92	340	16·18	174	8·28	+ 7·90	17·65
Old Moat	16749	624	26·84	222	13·25	199	11·88	+ 1·37	36·04
Openshaw	22227	543	40·93	334	15·03	300	13·50	+ 1·53	14·97
Rusholme	16756	726	23·08	242	14·44	225	13·43	+ 1·01	28·93
St. George's	18367	318	57·76	431	23·47	242	13·18	+ 10·29	27·84
St. Luke's	17650	287	61·50	418	23·68	281	15·92	+ 7·76	28·71
St. Mark's	20897	517	40·42	396	18·95	264	12·63	+ 6·32	17·68
St. Peter's	10978	837	13·12	156	14·21	110	10·02	+ 4·19	32·05

Deaths in wards for various diseases and death rates per 1,000 of the population

(Figures compiled in the Health Department)

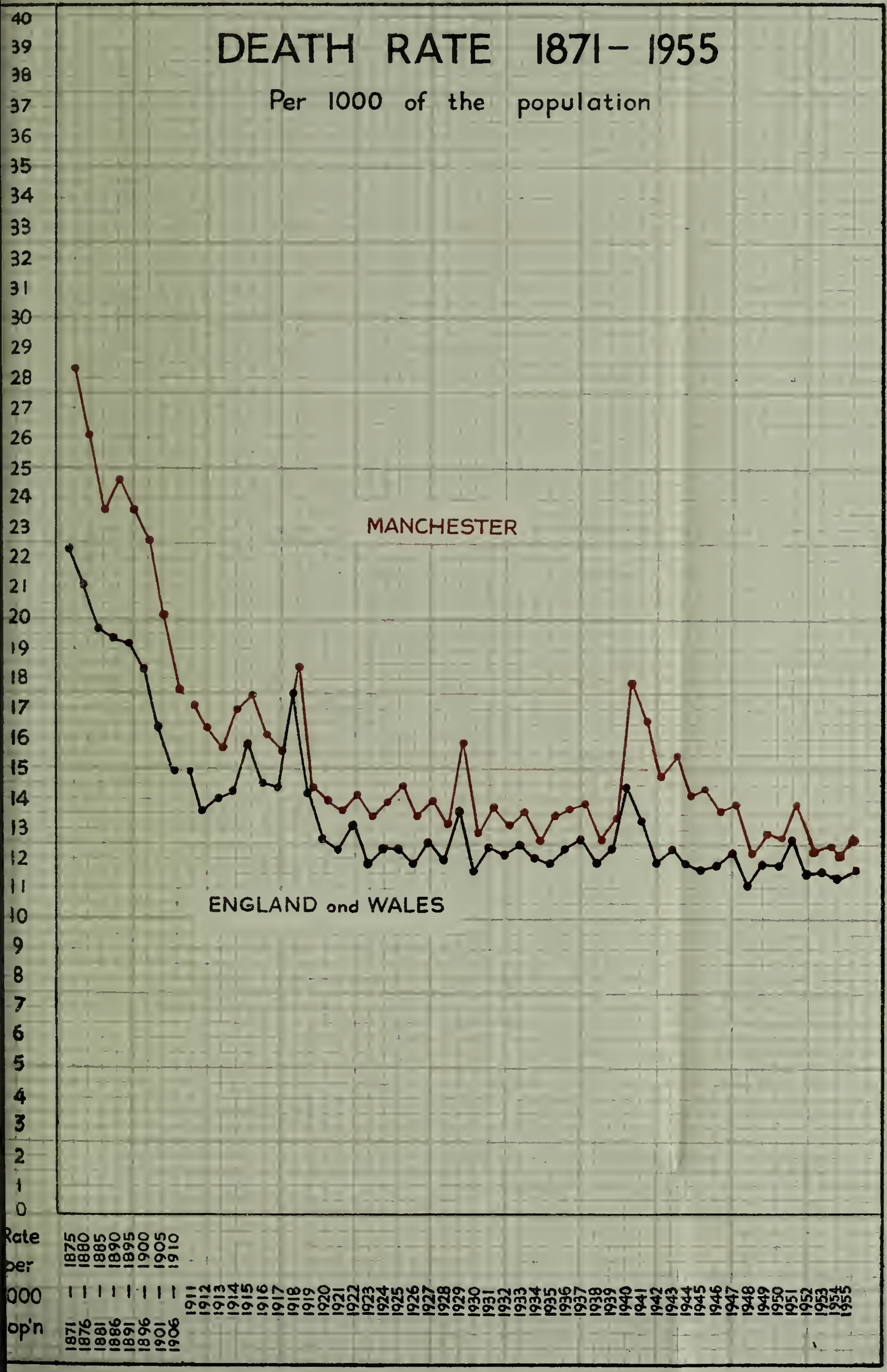
WARDS	ESTIMATED POPULATION	WHOOPING COUGH		DIPHTHERIA		MEASLES		TUBERCULOSIS ALL FORMS		SYPHILITIC DISEASES		DISEASES OF CIRCULATORY SYSTEM		*MALIGNANT NEOPLASMS		PNEUMONIA		BRONCHITIS		DIGESTIVE SYSTEM		GENITO URINARY SYSTEM		ALL CAUSES	
		Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
CITY OF MANCHESTER..	692200	2	0·00	—	—	2	0·00	144	0·21	20	0·03	3028	4·37	1577	2·28	413	0·60	788	1·14	255	0·37	152	0·22	8774	12·68
Alexandra Park	21242	—	—	—	—	—	—	4	0·19	1	0·05	85	4·00	71	3·34	6	0·28	23	1·08	7	0·33	2	0·94	257	12.10
All Saints	18146	—	—	—	—	—	—	8	0·44	—	—	62	3·42	32	1·76	13	0·72	23	1·27	4	0·22	2	0·11	213	11·74
Ardwick	17201	—	—	—	—	—	—	7	0·41	—	—	74	4·30	44	2·56	10	0·58	26	1·51	6	0·35	5	0·29	219	12·73
Baguley	18402	—	—	—	—	—	—	2	0·11	—	—	27	1·47	21	1·14	8	0·43	8	0·43	3	0·16	1	0·05	101	5·49
Barlow Moor	15404	—	—	—	—	—	—	1	0·06	2	0·13	151	9·80	39	2·53	24	1·56	26	1·69	10	0·65	6	0·39	386	25·06
Benchill	17566	—	—	—	—	—	—	8	0·46	—	—	49	2·79	36	2·05	10	0·57	10	0·57	6	0·34	4	0·23	178	10·13
Beswick	18982	—	—	—	—	—	—	6	0·32	1	0·05	76	4·00	31	1·63	17	0·90	25	1·32	5	0·26	6	0·32	228	12·01
Blackley	21731	—	—	—	—	—	—	4	0·18	1	0·05	73	3·36	53	2·44	14	0·64	23	1·06	8	0·37	2	0·09	238	10·95
Bradford	22326	—	—	—	—	—	—	3	0·13	1	0·04	86	3·85	45	2·02	15	0·67	25	1·12	6	0·27	5	0·22	249	11·15
Burnage	21746	—	—	—	—	—	—	1	0·05	—	—	104	4·78	53	2·44	9	0·41	12	0·55	6	0·28	5	0·23	249	11·45
Cheetham	13840	—	—	—	—	—	—	3	0·22	1	0·07	84	6·07	33	2·38	9	0·65	10	0·72	6	0·43	6	0·43	193	13·94
Chorlton-cum-Hardy	19774	—	—	—	—	—	—	6	0·30	—	—	91	4·60	55	2·78	8	0·40	18	0·91	5	0·25	3	0·15	263	13·30
Collegiate Church	13215	—	—	—	—	—	—	5	0·38	—	—	62	4·69	45	3·41	17	1·29	9	0·68	6	0·45	2	0·15	211	15·97
Crumpsall	23078	—	—	—	—	—	—	6	0·26	3	0·13	179	7·76	57	2·47	17	0·74	25	1·08	17	0·74	8	0·35	427	18·50
Didsbury	17431	—	—	—	—	—	—	1	0·06	—	—	92	5·28	25	1·43	9	0·52	15	0·86	2	0·11	4	0·23	214	12·28
Gorton North	22746	—	—	—	—	—	—	2	0·09	—	—	87	3·82	44	1·93	3	0·13	23	1·01	6	0·26	8	0·35	246	10·82
Gorton South	17156	—	—	—	—	1	0 06	3	0·17	1	0·06	73	4·26	53	3·09	12	0·70	16	0·93	4	0·23	4	0·23	219	12·77
Harpurhey	18023	—	—	—	—	—	—	5	0·28	1	0·06	94	5·22	34	1·89	9	0·50	36	2·00	8	0·44	3	0·17	261	14·48
Hugh Oldham	17949	—	—	—	—	—	—	5	0·28	1	0·06	56	3·12	51	2·84	16	0·89	34	1·89	10	0·56	2	0·11	231	12·87
Levenshulme	18959	—	—	—	—	—	—	2	0·11	—	—	88	4·64	44	2·32	13	0·69	20	1·05	7	0·37	8	0·42	261	13·77
Lightbowne	19699	—	—	—	—	—	—	3	0·15	1	0·05	79	4·01	42	2·13	4	0·20	23	1·17	15	0·76	6	0·30	239	12·13
Longsight	15401	—	—	—	—	—	—	1	0·06	—	—	85	5·52	36	2·34	12	0·78	23	1·49	5	0·32	5	0·32	228	14·80
Miles Platting	14241	1	0·07	—	—	—	—	1	0·07	—	—	58	4·07	30	2·11	10	0·70	22	1·54	6	0·42	4	0·28	189	13·27
Moss Side East	18425	—	—	—	—	—	—	3	0·16	—	—	79	4·29	38	2·06	14	0·76	28	1·52	5	0·27	3	0·16	232	12·59
Moss Side West	17512	—	—	—	—	—	—	6	0·34	1	0·06	78	4·45	43	2·46	9	0·51	32	1·83	8	0·46	4	0·23	243	13·88
Moston	20283	—	—	—	—	—	—	2	0·10	—	—	77	3·80	37	1·82	9	0·44	27	1·33	12	0·59	4	0·20	232	11·44
New Cross	13771	—	—	—	—	—	—	4	0·29	—	—	63	4·57	40	2·90	15	1·09	23	1·67	9	0·65	—	—	216	15·69
Newton Heath	18566	—	—	—	—	—	—	7	0·38	—	—	85	4·58	41	2·21	7	0·38	16	0·86	8	0·43	5	0·27	242	13·03
Northenden	21020	—	—	—	—	—	—	1	0·05	—	—	45	2·14	44	2·09	6	0·29	14	0·67	4	0·19	4	0·19	174	8·28
Old Moat	16749	—	—	—	—	—	—	6	0·36	—	—	66	3·94	36	2·15	10	0·60	21	1·25	4	0·24	4	0·24	199	11·88
Openshaw	22227	—	—	—	—	—	—	—	—	2	0·09	111	4·99	62	2·79	8	0·36	29	1·30	5	0·22	4	0·18	300	13·50
Rusholme	16756	—	—	—	—	—	—	2	0·12	—	—	81	4·83	43	2·57	13	0·78	15	0·90	3	0·18	3	0·18	225	13·43
St. George's	18367	—	—	—	—	—	—	4	0·22	1	0·05	77	4·19	43	2·34	11	0·60	37	2·01	8	0·44	7	0·38	242	13·18
St. Luke's	17650	—	—	—	—	—	—	3	0·17	—	—	111	6·29	39	2·21	14	0·79	19	1·08	9	0·51	2	0·11	281	15·92
St. Mark's	20897	1	0·05	—	—	—	—	10	0·48	1	0·05	95	4·55	46	2·20	12	0·57	25	1·20	9	0·43	3	0·14	264	12·63
St. Peter's	10978	—	—	—	—	1	0 09	4	0·36	—	—	39	3·55	21	1·91	6	0·55	8	0·73	2	0·18	2	0·18	110	10·02
Withington	15239	—	—	—	—	—	—	1	0·07	—	—	67	4·40	39	2·56	9	0·59	11	0·72	7	0·46	5	0·33	180	11·81
Woodhouse Park	19499	—	—	—	—	—	—	4	0·21	1	0 05	39	2·00	31	1·59	5	0 26	8	0·41	4	0·21	1	0·05	134	6·87

NOTE—* Includes neoplasms of lymphatic and haematopoietic tissues.



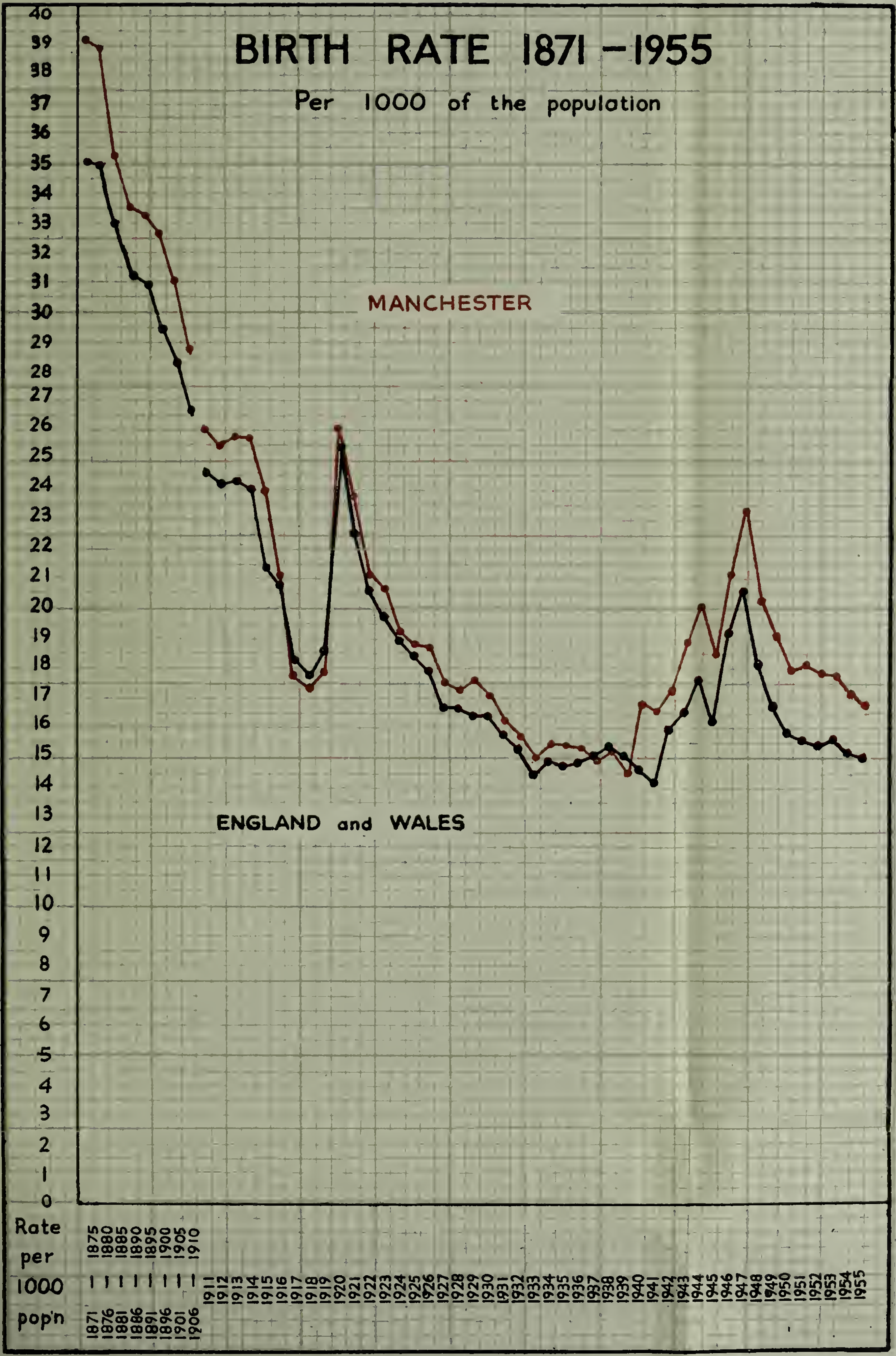
BIRTH, MARRIAGE AND DEATH RATES 1871-1955

Per 1000 of the population



DEATH RATE 1871– 1955

Per 1000 of the population


BIRTH RATE 1871 – 1955
Per 1000 of the population
MANCHESTER
ENGLAND and WALES
40
39
38
37
36
35
34
33
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30
29
28
27
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9
8
7
6
5
4
3
2
1
0
Rate per 1000 pop'n
1871 1875
1876 1880
1881 1885
1886 1890
1891 1895
1896 1900
1901 1905
1906 1910
1911
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1913
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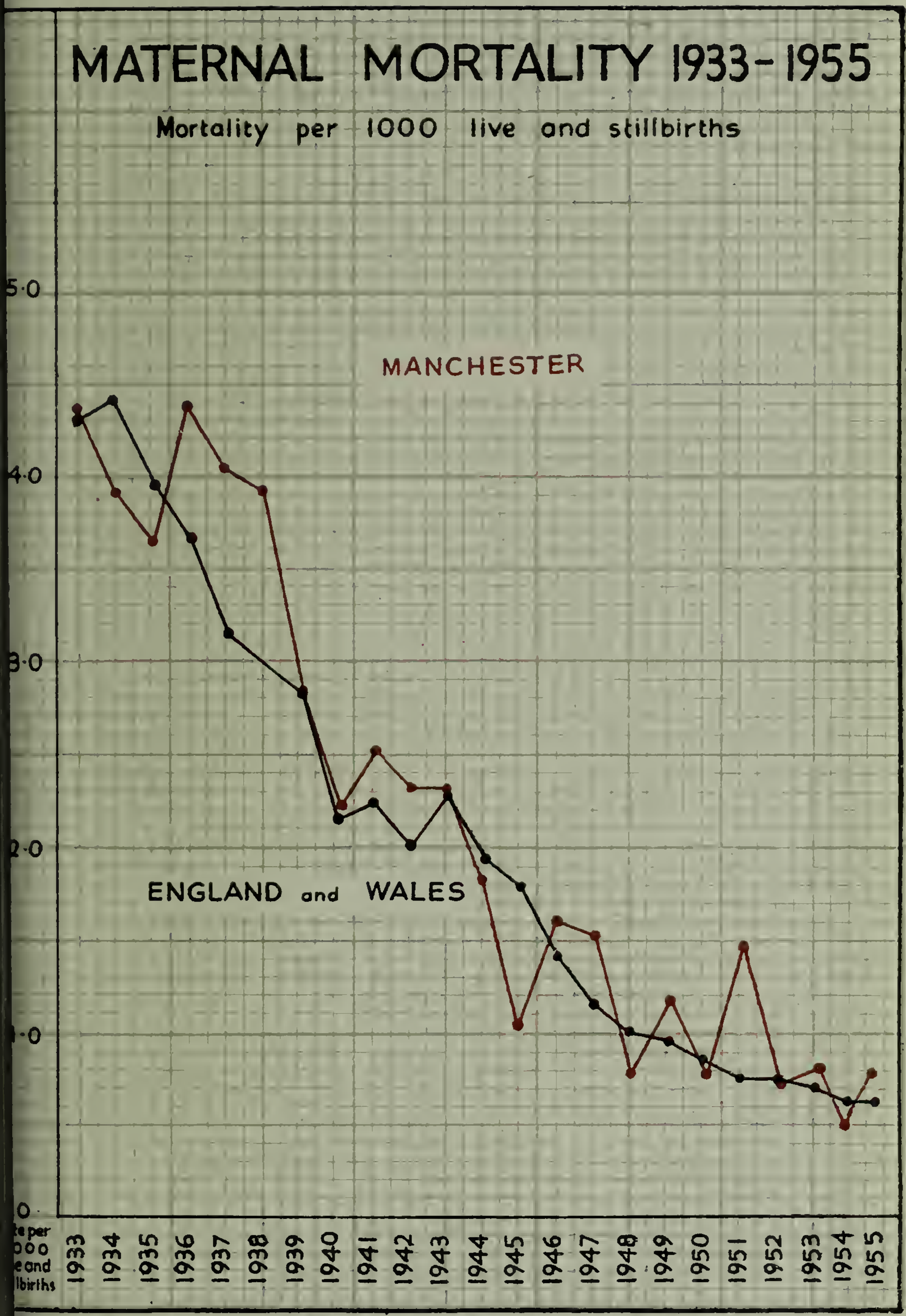
MATERNAL MORTALITY 1933-1955
Mortality per 1000 live and stillbirths
MANCHESTER
ENGLAND and WALES
5·0
4·0
3·0
2·0
·0
0
e per
000
e and
lbirths
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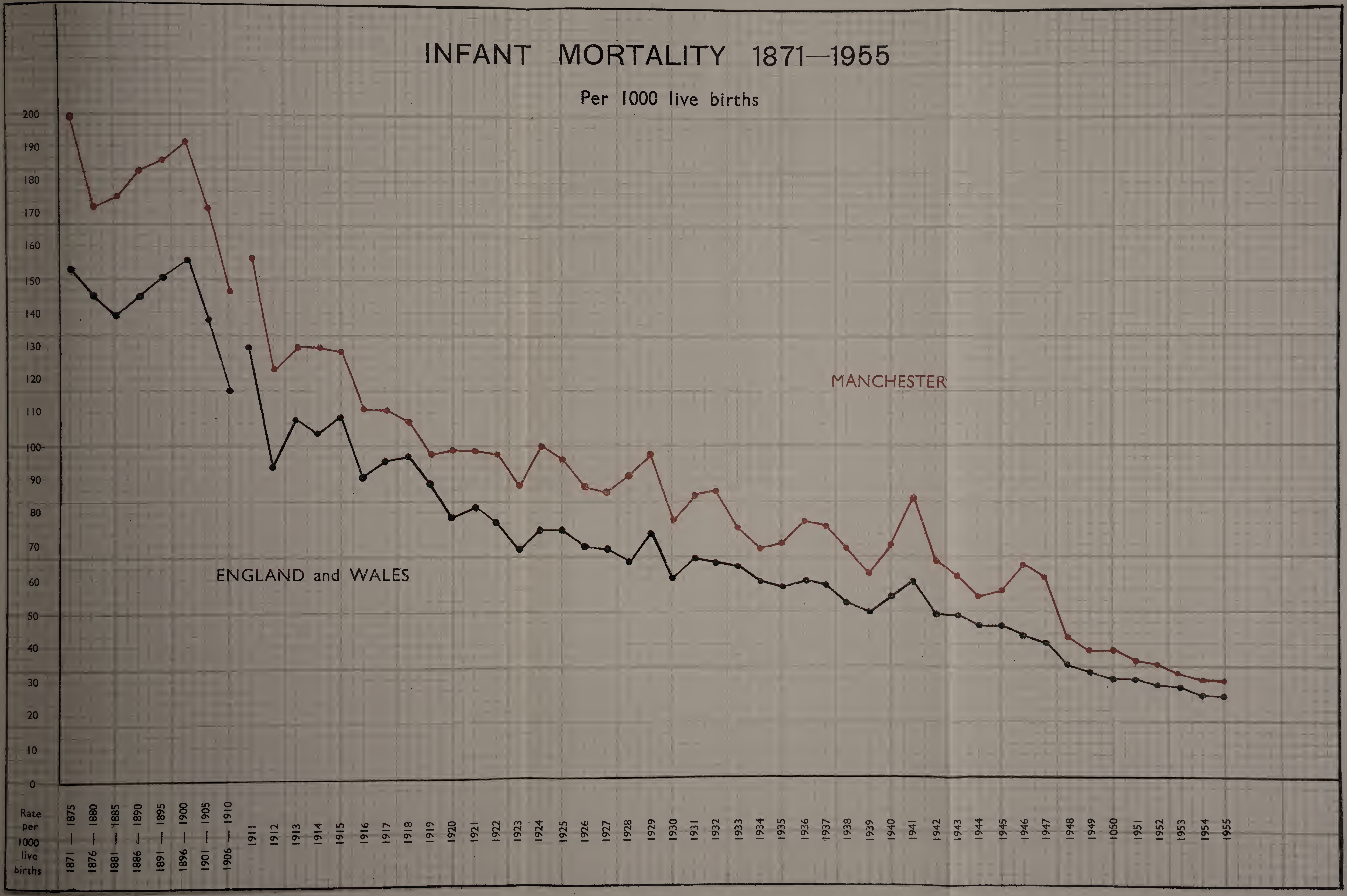
1955



INFANT MORTALITY 1871—1955

Per 1000 live births

(*Figures compiled in the Health Department*)

Cause of death	Under 1 year					1 to 5 years					Total under 5 Years
	Under 4 weeks	4 weeks to 3 months	3—6 months	6—12 months	Total	1—2 years	2—3 years	3—4 years	4—5 years	Total	
Tuberculosis, respiratory	—	—	—	—	—	—	—	—	—	—	—
,, meninges and central nervous system	—	—	—	—	—	—	1	—	1	2	2
,, intestine, peritoneum and mesenteric glands	—	—	—	—	—	—	—	—	—	—	—
,, other	—	—	—	—	—	—	2	—	—	2	2
Syphilitic diseases	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	—	—	—	—	—
Scarlet fever	—	—	—	—	—	—	—	—	—	—	—
Whooping cough	—	—	—	2	2	—	—	—	—	—	2
Measles	—	—	—	—	—	1	1	—	—	2	2
Acute poliomyelitis	—	—	—	—	—	—	—	—	—	—	—
Meningococcal infections	—	1	1	1	3	—	—	—	—	—	3
Acute infectious encephalitis	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	1	—	—	—	1	1
Food poisoning	—	—	—	—	—	—	—	—	—	—	—
Meningitis (not tubercular)	1	2	1	—	4	1	—	—	—	1	5
Other diseases of nervous system	—	—	2	—	2	2	—	—	—	2	4
Influenza	—	—	—	—	—	—	—	—	—	—	—
Pneumonia, broncho	—	16	13	9	38	2	1	—	—	3	41
,, lobar	—	—	1	—	1	—	—	1	—	1	2
,, other	—	1	1	1	3	—	—	—	—	—	3
Bronchitis	1	2	4	2	9	1	—	—	1	2	11
Other respiratory diseases	—	1	2	—	3	1	—	—	—	1	4
Diarrhoea (4 weeks—2 years)	—	—	4	2	6	—	—	—	—	—	6
Other diseases of digestive system	6	2	1	2	11	—	—	—	—	—	11
Congenital malformations	45	14	9	4	72	—	4	2	—	6	78
Birth injury, with immaturity	7	—	—	—	7	—	—	—	—	—	7
,, ,, without immaturity	23	—	1	—	24	—	—	—	—	—	24
Atelectasis, with immaturity	18	1	—	—	19	—	—	—	—	—	19
,, without immaturity	22	2	—	—	24	—	—	—	—	—	24
Pneumonia of newborn with immaturity	3	—	—	—	3	—	—	—	—	—	3
,, ,, without immaturity	8	—	—	—	8	—	—	—	—	—	8
Diarrhoea of newborn with immaturity	—	—	—	—	—	—	—	—	—	—	—
,, ,, without immaturity	2	—	—	—	2	—	—	—	—	—	2
Other infections of newborn with immaturity	—	—	—	—	—	—	—	—	—	—	—
,, ,, ,, without immaturity	2	—	—	—	2	—	—	—	—	—	2
Haemolytic disease of newborn with immaturity	2	—	—	—	2	—	—	—	—	—	2
,, ,, ,, ,, ,, without immaturity	4	—	—	—	4	—	—	—	—	—	4
Other diseases of early infancy with immaturity	2	—	—	—	2	—	—	—	—	—	2
,, ,, ,, ,, ,, without immaturity	5	—	—	—	5	—	—	—	—	—	5
Immaturity, unqualified	62	—	—	—	62	—	—	—	—	—	62
Suffocation (overlain)	1	1	1	1	4	—	—	—	—	—	4
Other violence	1	1	1	1	4	1	6	6	5	18	22
Other causes	—	3	1	2	6	3	6	—	1	10	16
All causes	215	47	43	27	332	13	21	9	8	51	383

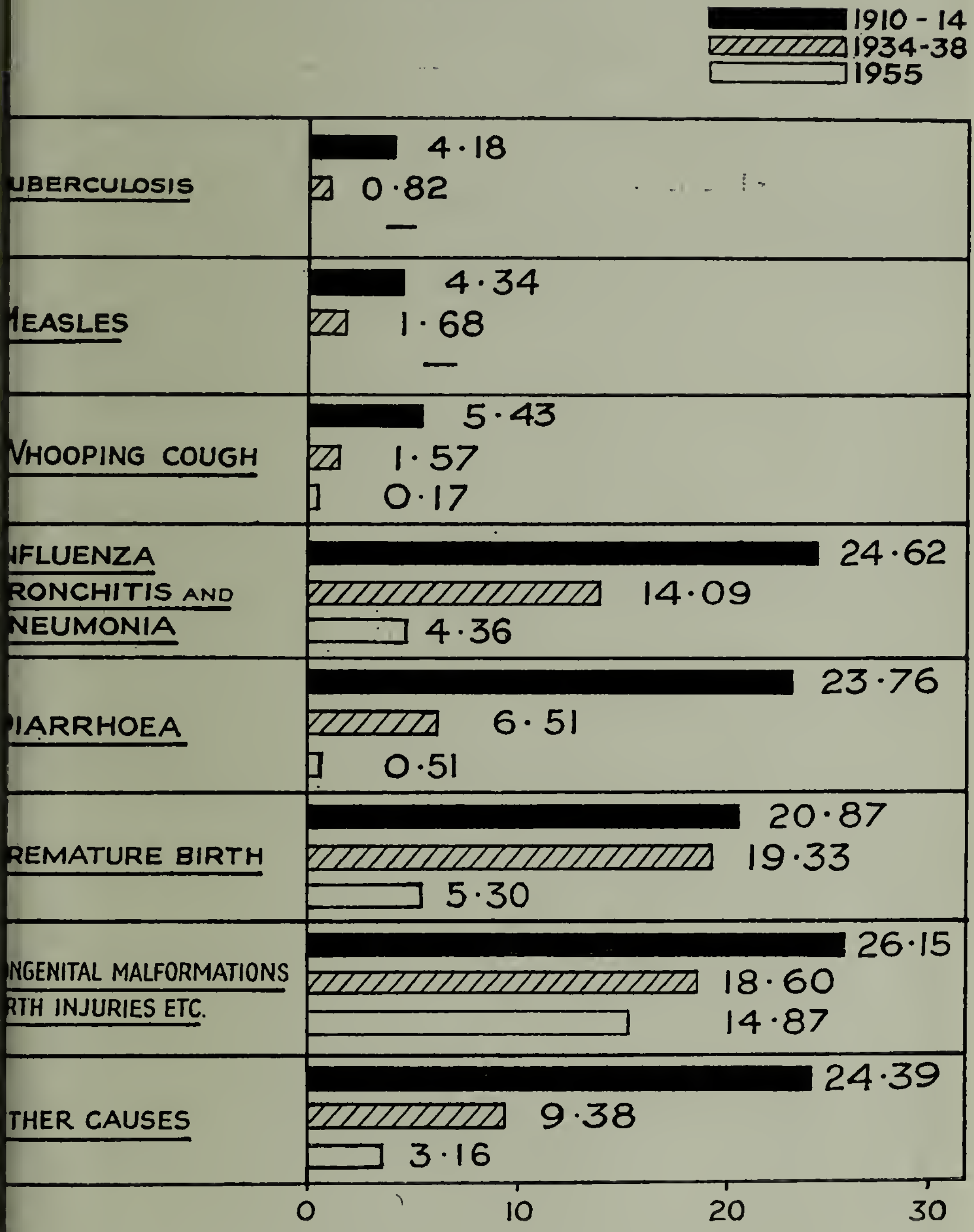
Infant mortality

Deaths from various causes per 1,000 live births

1951–55

Cause of death	Rate per 1,000 live births				
	1951	1952	1953	1954	19
All causes	35·29	34·28	30·53	29·47	28·
Tuberculosis respiratory	0·16	..	..	..	..
,, other	0·16	0·08	..	0·08	.
Syphilitic diseases	..	0·16	..	..	.
Scarlet fever	..	..	..	0·08	.
Diphtheria	..	..	..	..	.
Whooping cough	0·16	0·40	0·24	0·08	0·
Meningococcal infections	0·08	..	0·24	0·08	0·
Acute poliomyelitis	..	..	..	..	.
Acute infectious encephalitis	..	..	..	..	.
Measles	0·08	0·08	..	0·08	.
Diseases of the nervous system	0·96	0·24	0·08	0·42	0·
Influenza	0·24	..	0·08	0·08	.
Pneumonia (over 4 weeks of age)	4·50	4·12	3·03	2·36	3·
Bronchitis	1·29	0·81	1·15	1·27	0·
Other respiratory diseases	0·24	0·24	0·33	0·42	0·
Diarrhoeal diseases	2·41	1·54	0·74	0·93	0·
Other digestive diseases	0·32	0·57	0·74	0·34	0·
Nephritis and nephrosis	0·08	..	..	..	.
Congenital malformations	4·50	6·23	4·34	6·84	6·
Birth injuries	3·78	3·48	3·60	3·72	2·
Other diseases of early infancy	8·60	7·36	6·87	7·60	6·
Immaturity, unqualified	4·82	6·95	6·96	4·39	5·
Violence	1·61	1·05	1·23	0·08	0·
All other causes	1·30	0·97	0·90	0·62	0·

INFANT MORTALITY



Deaths under one year of age from diarrhoea, congenital malformations, diseases of early infancy and other causes 1936–1955

Year	Diarrhoea		Congenital malformations		Injury at birth		Atelectasis		Others of early infancy		Immaturity unqualified		Other causes		Total	Infant mortality rate per 1,000 live births
	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	deaths	
1936.. ..	54	4.8	95	8.5	36	3.2	14	1.2	56	5.0	233	20.7	375	33.4	863	76.8
1937.. ..	89	8.3	93	8.6	44	4.1	18	1.7	44	4.1	213	19.7	322	29.8	823	76.3
1938.. ..	100	9.1	87	7.9	29	2.6	25	2.3	47	4.3	192	17.4	281	25.4	761	69.0
1939.. ..	60	5.8	83	8.0	31	3.0	29	2.8	47	4.5	161	15.5	223	21.5	634	61.1
1940.. ..	70	6.7	92	8.9	25	2.4	16	1.5	56	5.4	146	14.1	324	31.2	729	70.2
1941.. ..	109	11.1	81	8.2	23	2.3	22	2.2	44	4.5	176	17.9	377	38.3	832	84.5
1942.. ..	88	8.6	86	8.4	20	1.9	19	1.8	43	4.2	187	18.2	220	21.4	663	64.5
1943.. ..	85	7.6	80	7.2	36	3.2	12	1.1	49	4.4	167	14.9	252	22.5	681	60.9
1944.. ..	72	5.9	82	6.7	28	2.3	18	1.5	49	4.0	164	13.4	241	19.8	654	53.6
1945.. ..	83	7.3	82	7.2	42	3.7	24	2.1	41	3.6	129	11.4	233	20.5	634	55.8
1946.. ..	167	12.0	118	8.4	40	2.9	47	3.4	38	2.7	193	13.8	287	20.5	890	63.7
1947.. ..	223	14.1	90	5.7	37	2.3	57	3.6	49	3.1	181	11.4	309	19.6	946	59.8
1948.. .	57	4.1	72	5.2	45	3.3	49	3.6	22	1.6	104	7.5	232	16.8	581	42.1
1949.. ..	57	4.3	63	4.8	45	3.4	47	3.6	25	1.9	70	5.3	195	14.9	502	38.2
1950.. ..	38	3.0	67	5.4	43	3.5	58	4.7	41	3.3	81	6.5	143	11.5	471	37.9
1951.. ..	30	2.4	56	4.5	47	3.8	73	5.9	34	2.7	60	4.8	139	11.2	439	35.3
1952.. ..	19	1.5	77	6.2	43	3.5	65	5.3	26	2.1	86	7.0	108	8.7	424	34.3
1953.. ..	9	0.7	53	4.3	44	3.6	51	4.2	33	2.7	85	7.0	98	8.0	373	30.5
1954.. ..	11	0.9	81	6.8	44	3.7	53	4.5	37	3.1	52	4.4	71	6.1	349	29.5
1955.. ..	6	0.5	72	6.2	31	2.6	43	3.7	28	2.4	62	5.3	90	7.7	332	28.4

Quinquennial rates of mortality from certain causes of death.

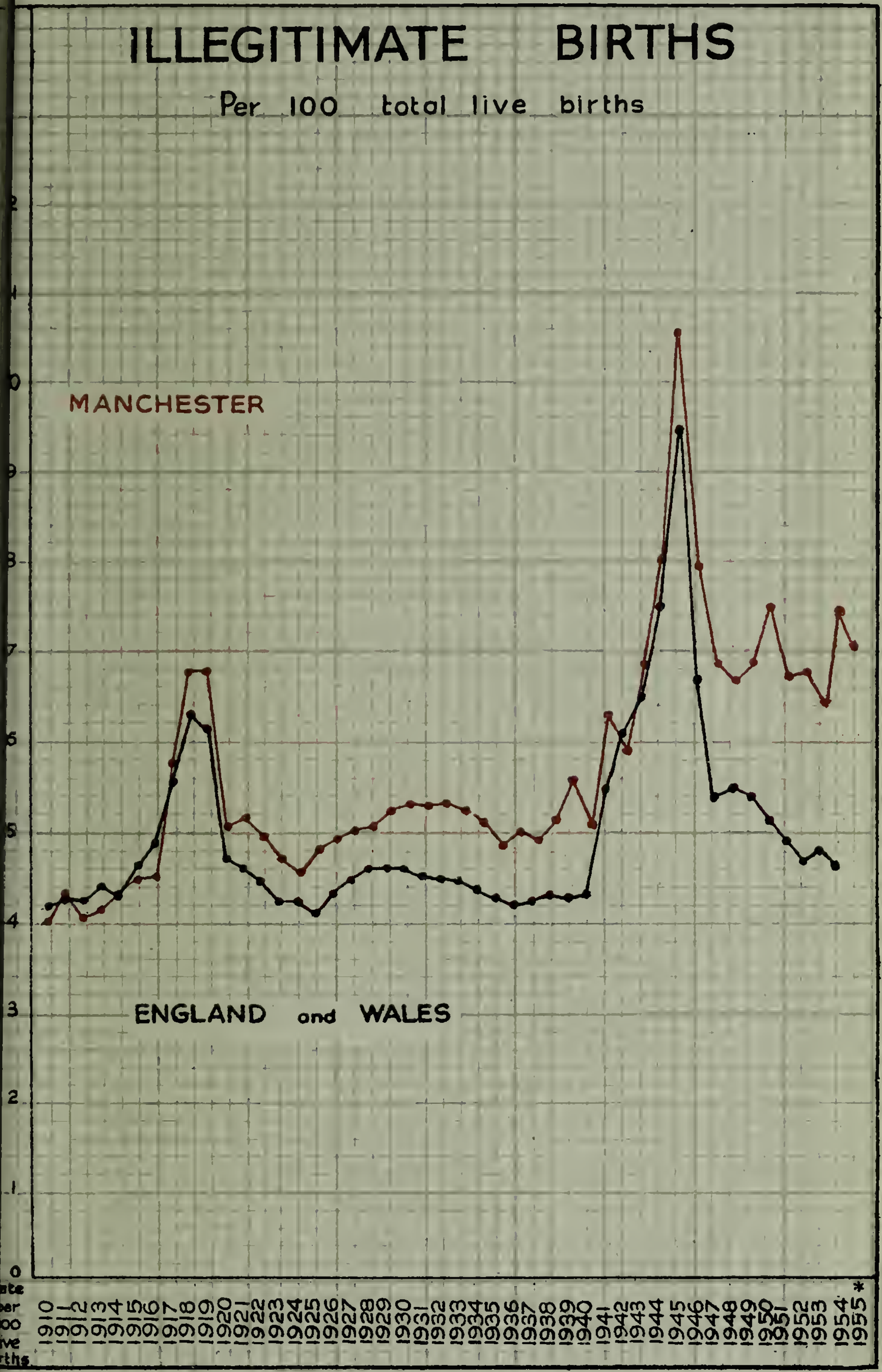
YEAR	RATES PER 1,000 PERSONS LIVING								RATES PER 1,000 BIRTHS*	
	Malignant neoplasms	Tuberculosis of respiratory system	Other forms of tuberculosis	Diseases of nervous system	Diseases of heart and circulatory system	Diseases of respiratory system	Diseases of digestive system	Nephritis and nephrosis	Puerperal and post abortive sepsis	Other puerperal causes
885	0·50	2·42	0·92	3·28	1·37	5·41	1·23	..	3·03	1·99
890	0·64	2·24	0·95	3·09	1·73	5·76	1·23	..	3·22	2·13
895	0·62	2·09	0·97	1·74	2·53	5·56	1·07	..	2·75	3·42
900	0·73	2·04	0·82	1·32	2·54	5·03	1·04	..	1·55	1·51
905	0·80	1·91	0·71	1·17	1·74	4·24	1·87	0·41	1·21	1·76
910	0·88	1·66	0·59	0·95	1·72	3·77	1·42	0·44	1·28	1·49
915	1·04	1·67	0·47	0·79	1·24	3·62	1·44	0·46	1·42	2·56
920	1·21	1·61	0·41	0·54	1·21	3·41	0·84	0·41	1·70	2·14
925	1·36	1·27	0·30	0·51	1·39	3·11	0·74	0·34	1·83	2·10
930	1·50	1·19	0·21	0·48	1·81	2·65	0·75	0·36	2·14	2·63
935	1·67	1·02	0·16	0·41	2·50	1·97	0·55	0·37	*1·59	* 2·20
940	1·81	0·93	0·14	0·38	3·10	2·07	0·53	0·37	1·11	2·40
945	2·10	0·93	0·14	†1·62	3·10	2·39	0·65	0·37	0·71	1·30
950	1·99	0·64	0·08	1·53	3·20	1·99	0·57	0·26	0·30	0·88
955	2·20	0·31	0·03	1·77	4·20	1·95	0·42	0·11	0·18	0·67

rnal mortality rates until 1930 were based on per 1,000 live births. From 1931 onwards these rates were ted on per 1,000 live and stillbirths.

ases of nervous system includes cerebral hæmorrhage from 1941. From 1911 rates are based on Registrar eneral's returns.

Legitimate and illegitimate live births and deaths of infants under one year of age—from Registrar General's returns

Year	LIVE BIRTHS					DEATHS UNDER ONE YEAR OF AGE								
	Legitimate	Illegitimate	Total	Illegitimate percentage of total live births	Illegitimate percentage of total live births England & Wales	Number			Rate per 1,000 related live births					
						Legitimate	Illegitimate	Total	Legitimate	Illegitimate	Total	England and Wales		
												Legitimate	Illegitimate	Total
1916	14.901	696	15.597	4.46	4.80	1,578	159	1,737	105.90	228.45	111.37	86.6	183.8	91.2
1917	12,195	742	12.937	5.74	5.56	1,262	176	1,438	103.48	237.20	111.15	90.3	201.1	96.5
1918	12.053	873	12,926	6.75	6.21	1,201	180	1,381	100.00	206.19	106.83	91.3	185.6	97.2
1919	12,758	928	13,686	6.78	6.05	1,175	160	1,333	91.94	172.41	97.40	83.7	172.8	89.1
1920	18,253	960	19.213	4.99	4.62	1,169	213	1,882	64.04	221.88	97.95	76.2	156.1	79.9
1921	16,647	902	17,549	5.14	4.52	1,542	171	1,713	92.63	189.58	97.61	79.2	158.3	82.8
1922	15,013	774	15,787	4 90	4.38	1,375	150	1,525	91.59	193.80	96.60	74.2	138.7	77.0
1923	14,677	711	15,388	4.62	4.16	1,243	117	1,360	84.69	164.56	88.35	66.6	131.8	69.4
1924	13,826	657	14.483	4.54	4.15	1,316	138	1,454	95.18	210.05	100.39	72.6	133.0	75.1
1925	13.493	669	14.162	4.72	4.07	1,251	113	1,364	92.72	168.91	96.31	72.5	135.6	75.0
1926	13.290	679	13,969	4.86	4.26	1,116	100	1,216	83.97	147.28	87.05	67.6	129.6	70.2
1927	12,388	648	13.036	4.97	4.35	1,032	90	1,122	83.31	138.89	86.07	67.4	119.8	69.7
1928	12,256	646	12,902	5.01	4.50	1,084	95	1,179	88.44	147.06	91.38	62.7	114.8	65.1
1929	12,380	678	13,058	5.19	4.55	1,144	128	1,272	92.41	188.79	97.41	71.9	125.9	74.4
1930	12,178	673	12,851	5.24	4.57	881	114	995	72.34	169.39	77.43	57.8	104.7	60.0
1931	11,694	643	12,337	5.21	4.44	956	93	1,049	81.75	144.64	85.03	64.3	110.7	66.3
1932	11.206	619	11,825	5.24	4.39	934	81	1,015	83.35	130.86	85.83	62.9	112.2	65.0
1933	10,582	574	11:156	5.15	4.37	769	65	834	72.67	113.24	74.76	61.7	107.5	63.7
1934	10,974	581	11,555	5.03	4.31	742	56	798	67.61	96.39	69.06	56.9	95.4	58.6
1935	10,842	537	11,379	4.72	4.19	757	52	809	69.82	96.83	71.09	55.5	89.5	56.9
1936	10,681	550	11,231	4.90	4.11	816	47	863	76.40	85.45	76.84	57.3	88.0	58.5
1937	10,268	518	10,786	4.80	4.15	770	53	823	74.99	102.32	76.30	56.3	88.1	57.6
1938	10,468	557	11,025	5.05	4.25	702	59	761	67.06	105.92	69.03	51.4	80.8	52.7
1939	9,807	571	10.378	5.50	4.19	587	47	634	59.85	82.31	61.09	48.6	89.8	50.4
1940	9,873	515	10,388	4.96	4.26	677	52	729	68.57	100.97	70.18	55.6	82.4	55.8
1941	9,239	610	9,849	6.19	5.36	767	65	832	83.02	106.56	84.47	58.8	82.3	58.8
1942	9,680	596	10,276	5.80	6.00	621	42	663	64.15	70.47	64.52	49.2	75.0	49.3
1943	10,431	754	11,185	6.74	6.38	625	56	681	59.92	74.27	60.88	47.6	71.4	49.0
1944	11,239	965	12,204	7.91	7.34	577	77	654	51.34	79.79	53.59	43.7	68.5	44.5
1945	10,175	1,187	11,362	10.45	9.33	557	77	634	54.74	64.87	55.80	44.1	64.8	47.0
1946	12,874	1,095	13,969	7.84	6.57	798	92	890	61.99	84.02	63.71	41.6	60.1	40.9
1947	14,760	1,070	15,830	6.76	5.29	859	87	946	58.20	81.31	59.76	40.4	58.0	41.8
1948	12,886	908	13,794	6.58	5.41	524	57	581	40.66	62.77	42.12	33.3	45.3	34.5
1949	12,243	886	13.129	6.75	5.34	461	41	502	37.65	46.28	38.24	31.7	44.8	32.7
1950	11,523	913	12,436	7.34	5.06	433	38	471	37.58	41.62	37.87	29.1	39.4	29.8
1951	11,616	822	12,438	6.58	4.84	407	32	439	35.03	38.93	35.29	29.2	38.5	29.6
1952	11.549	818	12,367	6.61	4.60	398	26	424	34.46	31.78	34.28	27.2	34.9	27.6
1953	11,450	768	12,218	6.29	4.75	352	21	373	30.74	27.34	30.53	26.5	33.0	26.8
1954	10,967	876	11,843	7.40	4.60	322	27	349	29 36	30.82	29.47	25.1	32.1	25.4
1955	10,879	825	11,704	7.05	•	312	20	332	28.68	24.24	28.37	•	•	24.9



Rate for England and Wales for 1955 not available.

(Figures compiled in the Health Department)

WARDS	LIVE BIRTHS Total	Legitimate	Illegitimate	% Illegitimate to total live births	DEATHS UNDER 1 YEAR OF AGE Total	Legitimate	Illegitimate	Rate per 1000 live births	Rate per 1000 live births legitimate	Rate per 1000 live births illegitimate
CITY OF MANCHESTER ..	11704	10879	825	7·05	332	312	20	28·37	28·68	24·24
Alexandra Park	228	210	18	7·89	2	2	—	8·77	9·52	—
All Saints..	490	404	86	17·55	18	16	2	36·73	39·60	23·26
Ardwick	418	389	29	6·94	5	5	—	11·96	12·85	—
Baguley	418	404	14	3·35	7	6	1	16·75	14·85	71·43
Barlow Moor	161	147	14	8·69	1	1	—	6·21	6·80	—
Benchill	368	336	32	8·70	18	18	—	48·91	53·57	—
Beswick	340	327	13	3·82	9	9	—	26·47	27·52	—
Blackley	330	323	7	2·12	9	9	—	27·27	27·86	—
Bradford	350	334	16	4·57	12	12	—	34·29	35·93	—
Burnage	219	208	11	5·02	6	4	2	27·40	19·23	181·82
Cheetham	233	219	14	6·01	2	2	—	8·58	9·13	—
Chorlton-cum-Hardy	148	136	12	8·11	6	6	—	40·54	44·12	—
Collegiate Church	259	235	24	9·27	9	7	2	34·75	29·79	83·33
Crumpsall	285	275	10	3·51	7	7	—	24·56	25·45	—
Didsbury	204	200	4	1·96	6	6	—	29·41	30·00	—
Gorton North	261	249	12	4·60	2	2	—	7·66	8·03	—
Gorton South	217	210	7	3·23	4	4	—	18·43	19·05	—
Harpurhey	323	308	15	4·64	12	11	1	37·15	35·71	66·67
Hugh Oldham	435	401	34	7·81	16	15	1	36·78	37·41	29·41
Levenshulme	242	228	14	5·78	5	5	—	20·66	21·93	—
Lightbowne	249	238	11	4·42	7	7	—	28·11	29·41	—
Longsight	224	205	19	8·48	8	8	—	35·71	39·02	—
Miles Platting	269	258	11	4·09	17	17	—	63·20	65·89	—
Moss Side East	484	407	77	15·91	16	13	3	33·06	31·94	38·96
Moss Side West	374	327	47	12·57	11	10	1	29·41	30·58	21·28
Moston	290	280	10	3·45	14	14	—	48·28	50·00	—
New Cross	318	295	23	7·23	12	11	1	37·74	37·29	43·50
Newton Heath	254	245	9	3·54	5	5	—	19·69	20·41	—
Northenden	340	334	6	1·76	6	6	—	17·65	17·96	—
Old Moat	222	214	8	3·60	8	8	—	36·04	37·38	—
Openshaw..	334	322	12	3·59	5	5	—	14·97	15·53	—
Rusholme	242	224	18	7·44	7	7	—	28·93	31·25	—
St. George's	431	385	46	10·67	12	11	1	27·84	28·57	21·74
St. Luke's	418	368	50	11·96	12	10	2	28·71	27·17	40·00
St. Mark's	396	363	33	8·33	7	7	—	17·68	19·28	—
St. Peter's	156	142	14	8·97	5	4	1	32·05	28·17	71·43
Withington	189	176	13	6·88	2	1	1	10·58	5·68	76·92
Woodhouse Park	585	553	32	5·47	22	21	1	37·61	37·97	31·25

Still-births, neo-natal deaths, deaths at four weeks to one year of age, and infant death rate, 1936-1955

Year	Total live and still-births	STILL-BIRTHS		NEO-NATAL DEATHS		DEATHS, 4 WEEKS—1 YEAR		DEATHS UNDER 1 YEAR AND STILL-BIRTHS		Infant death rate per 1,000 live births
		Number of still-births	Rate per 1,000 live and still-births	Number of neo-natal deaths, 0–4 weeks	Rate per 1,000 total live births	Number of deaths, 4 weeks–1 year	Rate per 1,000 total live births	Number of deaths under 1 year and still-births	Rate per 1,000 total live and still-births	
1936	11,762	531	45·15	385	34·28	478	42·56	1,394	118·52	76·84
1937	11,254	468	41·59	381	35·32	442	40·98	1,291	114·71	76·30
1938	11,532	507	43·96	351	31·84	410	37·19	1,268	109·95	69·03
1939	10,870	492	45·26	321	30·93	313	30·16	1,126	103·59	61·09
1940	10,866	478	43·99	295	28·40	434	41·78	1,207	111·08	70·18
1941	10,249	400	39·03	292	29·65	540	54·82	1,232	120·21	84·47
1942	10,719	443	41·33	304	29·58	359	34·94	1,106	103·18	64·52
1943	11,591	406	35·02	306	27·36	375	33·52	1,087	93·77	60·88
1944	12,571	367	29·19	315	25·81	339	27·78	1,021	81·22	53·59
1945	11,734	372	31·70	311	27·37	323	28·43	1,006	85·73	55·80
1946	14,414	445	30·87	474	33·93	416	29·78	1,335	92·62	63·71
1947	16,257	427	26·27	466	29·44	480	30·32	1,380	84·89	59·76
1948	14,170	376	26·53	274	19·85	307	22·26	957	67·54	42·12
1949	13,460	331	24·59	242	18·43	260	19·80	833	61·88	38·24
1950	12,769	333	26·08	263	21·15	208	16·72	804	62·96	37·87
1951	12,757	319	25·01	251	20·18	188	15·11	758	59·42	35·29
1952	12,716	349	27·45	269	21·75	155	12·53	773	60·78	34·28
1953	12,573	355	28·24	255	20·87	118	9·66	728	57·90	30·53
1954	12,232	389	31·80	237	20·01	112	9·46	738	60·33	29·47
1955	12,022	318	26·45	215	18·37	117	10·00	650	54·07	28·37

Abstract of Registrar General's Health R

YEAR	POPULATION	DEATH RATE			BIRTH RATE			INFANT DEATH RATE			ALL PUERPERAL CAUSES			PUERPERAL AND POST ABORTIVE SEPSIS			OTHER PUERPERAL CAUSES			ALL FORMS OF TUBERCULOSIS			PULMONARY TUBERCULOSIS			OTHER FORMS OF TUBERCULOSIS			TYPHOID AND PARATYPHOID FEVERS			SCARLET FEVER			DIPHTHERIA			ME
		Number of deaths	Per 1000 pop'n	England and Wales	Number of Births	Per 1000 pop'n	England and Wales	Number of deaths	Per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified
1901	543872	11801	21·70	16 9	15691	28 85	28·5	3114	198	151	61	3 89	4·73	34	2·17	2 24	27	1 72	2·49	—	1571	2·89	1339	1144	2 10	—	427	0·79	359	75	0·140	2692	127	0·230	457	133	0·240	—
1911	716163	12281	17·15	14·6	18595	25·96	24·4	2908	156	130	72	3·87	3·87	28	1·50	1·43	44	2·37	2·44	—	1491	2·08	1837	1143	1·60	—	348	0·49	256	50	0·070	1939	44	0·060	472	89	0·120	—
1921	744000	10111	13·59	12·1	17549	23·59	22·4	1713	98	82	64	3·65	3·91	34	1·94	1·38	30	1·71	2·53	2174	1230	1·65	1644	981	1·32	530	249	0·33	90	12	0·016	5419	59	0·079	1045	90	0·121	1135
1931	772090	10645	13·79	12·3	12337	15·98	15·8	1049	85	66	40	†3·09	†3·94	18	†1·39	†1·59	22	†1·70	†2·35	1710	994	1·29	1229	861	1·12	481	133	0·17	27	4	0·005	2973	11	0·014	735	60	0·078	7771
1932	763000	10076	13·21	12·0	11825	15·50	15·3	1015	86	65	47	3·79	4·04	20	1·61	1·55	27	2·18	2·49	1449	885	1·16	1061	766	1·00	388	119	0·16	47	3	0·004	2319	17	0·022	1069	81	0·106	12238
1933	758150	10345	13·65	12·3	11156	14·71	14·4	834	75	64	52	4·43	4·32	20	1·70	1·75	32	2·73	2·57	1357	891	1·18	1053	791	1·04	304	100	0·13	15	2	0·003	1804	14	0·018	1019	87	0·115	6350
1934	754600	9530	12·63	11·8	11555	15·31	14·8	798	69	59	48	3·97	4·42	16	1·32	1·95	32	2·65	2·47	1329	881	1·17	1026	761	1·01	303	120	0·16	16	2	0·003	2151	14	0·019	1276	83	0·110	11383
1935	748100	10120	13·53	11·7	11379	15·21	14·7	809	71	57	44	3·69	3·93	23	1·93	1·61	21	1·76	2·32	1251	808	1·08	957	714	0·95	294	94	0·13	25	4	0·005	2849	13	0·017	1302	60	0·080	9907
1936	744000	10207	13·72	12·1	11231	15·10	14·8	863	77	59	52	4·42	3·65	16	1·36	1·34	36	3·06	2·31	1226	776	1·04	937	671	0·90	289	105	0·14	19	2	0·003	2463	6	0·008	1649	91	0·122	8807
1937	736500	10216	13·87	12·4	10786	14·64	14·9	823	76	58	46	4·09	3·13	13	1·16	0·94	33	2·93	2·19	1359	789	1·07	1001	674	0·92	358	115	0·16	13	1	0·001	2656	7	0·009	1883	89	0·121	6550
1938	732900	9243	12·61	11·6	11025	15·04	15·1	761	69	53	46	3·98	2·97	17	1·47	0·86	29	2·51	2·11	1189	726	0·99	907	627	0·86	282	99	0·14	7	—	—	2487	8	0·011	1591	55	0·075	9949
1939	B 727600 D 702500	9405	13·39	12·1	10378	14·26	15·0	634	61	50	31	2·85	2·82	8	0·73	0·74	23	2·12	2·08	1114	701	1·00	849	601	0·86	265	100	0·14	30	1	0·001	1332	1	0·001	1031	36	0·051	574
1940	622300	11191	17·98	14·3	10388	16·69	14·6	729	70	55	24	2·21	2·16*	9	0·83	0·52*	15	1·38	1·64*	1182	769	1·24	943	678	1·09	239	91	0·15	72	1	0·002	768	1	0·002	917	47	0·076	14844
1941	601840	10016	16·64	12·9	9849	16·36	14·2	832	84	59	26	2·53	2·23*	10	0·97	0·48*	16	1·56	1·75*	1226	794	1·32	968	679	1·13	258	115	0·19	69	—	—	885	2	0·003	1009	46	0·076	3869
1942	601900	8861	14·72	11·6	10276	17·07	15·8	663	65	49	25	2·33	2·01*	7	0·65	0·42*	18	1·68	1·59*	1128	672	1·12	894	592	0·99	234	80	0·13	11	2	0·003	1869	1	0·002	814	27	0·045	10468
1943	599300	9290	15·50	12·1	11185	18·66	16·5	681	61	49	27	2·33	2·29	12	1·04	0·73	15	1·29	1·56	1172	639	1·07	900	546	0·91	272	93	0·16	20	1	0·002	1992	1	0·002	791	30	0·050	4419
1944	614160	8731	14·20	11·6	12204	19·85	17·6	654	54	46	23	1·83	1·93	8	0·64	0·59	15	1·19	1·34	1051	559	0·91	840	491	0·80	211	68	0·11	4	—	—	1539	—	—	266	6	0·010	6736
1945	623480	8985	14·41	11·4	11362	18·22	16·1	634	56	46	12	1·02	1·79	3	0·25	0·49	9	0·77	1·30	1113	577	0·93	913	496	0·80	200	81	0·13	9	1	0·001	1140	—	—	302	14	0 022	5596
1946	668660	9038	13·52	11·5	13969	20·89	19·1	890	64	43	23	1·60	1·43	5	0·35	0·31	18	1·25	1·12	973	527	0·79	805	460	0·69	168	67	0·10	18	1	0·001	775	—	—	259	11	0·016	3800
1947	685560	9453	13·79	12·0	15830	23·09	20·5	946	60	41	25	1·54	1·17	9	0·55	0·26	16	0·99	0·91	920	514	0·75	786	450	0·66	134	64	0·09	4	—	--	939	—	—	80	3	0·001	9008
1948	693000	8501	12·27	10·8	13794	19·90	17·9	581	42	34	11	0·78	1·02	1	0·07	0·24	10	0·71	0·78	1004	526	0·76	863	477	0·69	141	49	0·07	4	1	0·001	1222	—	—	43	1	0·001	10650
1949	699600	9036	12·91	11·7	13129	18·77	16·7	502	38	32	16	1·19	0·98	6	0·45	0·22	10	0·74	0·76	1053	456	0·65	899	418	0·60	154	38	0·05	15	—	—	1594	—	—	22	—	—	6485
1950	704500	8999	12·77	11·6	12436	17·65	15·8	471	38	30	10	0·78	0·86	1	0·08	0·12	9	0·70	0·74	869	458	0·65	737	411	0·58	132	47	0·07	2	1	0·001	1447	—	—	22	3	0·004	9798
1951	699900	9676	13·82	12·5	12438	17·77	15·5	439	35	30	19	1·49	0·79	5	0·39	0·19	14	1·10	0·60	816	357	0·51	711	318	0·45	105	39	0·06	15	—	—	970	—	—	10	—	—	8953
1952	705400	8576	12·16	11·3	12367	17·53	15·3	424	34	28	9	0·71	0·72	2	0·16	0·16	7	0·55	0·56	813	293	0·41	717	269	0·38	96	24	0·03	19	—	—	1121	—	—	7	1	0·001	10035
1953	701800	8638	12·31	11·4	12218	17·41	15·5	373	31	27	10	0·80	0·76	—	—	0·16	10	0·80	0·60	835	216	0·31	742	198	0·28	93	18	0·03	2	—	—	968	—	—	7	1	0·001	6798
1954	699000	8525	12·20	11·3	11843	16·94	15·2	349	29	25	6	0·49	0·69	—	—	0 14	6	0·49	0·55	779	209	0·30	672	188	0·27	107	21	0·03	1	—	—	767	1	0·001	—	—	—	9844
1955	692200	8777	12·68	11·7	11704	16·91	15·0	332	28	25	9	0·75	0 64	4	0 33	×	5	0·42	×	739	144	0·21	662	130	0·19	77	14	0·02	2	—	—	795	1	0·001	1	—	—	6514

B Population for calculating birth-rates.
D Population for calculating death-rates.

* Excluding abortion.
† From 1931 rates for maternal mortality are based on live and still births.
× Figures for 1955 not available.

From 1944 the number of notifications of infectious diseases refers to true cases only.

lth Reports, 1901 to 1955

MEASLES			WHOOPING COUGH			ACUTE POLIOMYELITIS AND POLIO-ENCEPHALITIS			MENINGOCOCCAL INFECTIONS			PNEUMONIA—ALL FORMS			INFLUENZA		BRONCHITIS		DIARRHŒA (under 2 years)		MALIGNANT NEOPLASMS		VASULAR LESIONS OF CENTRL NERVOUS SYSTEM		HEART DISEASE		OTHER DISEASES OF CIRCULATORY SYSTEM		NEPHRITIS AND NEPHROSIS		CONGENITAL MALFORMATIONS AND DEBILITY, ETC., INCLUDING PREMATURE BIRTH		VIOLENCE (Apart from suicide)		SUICIDE		YEAR
ified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1,000 pop'n	Notified	Deaths	Rate per 1,000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1,000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1,000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	
—	292	0·54	—	224	0·41	—	—	—	—	—	—	—	1212	2·23	99	0·18	1072	1·97	921	1·69	425	0·78	427	0·72	957	1·76	46	0·08	228	0·42	860	1·58	381	0·70	45	0·08	1901
—	337	0·47	—	141	0·20	—	—	—	—	—	—	—	1278	1·78	87	0·12	1074	1·30	1100	1·54	772	1·08	440	0·61	965	1·34	150	0·21	345	0·48	798	1·11	399	0·56	66	0·09	1911
1135	4	0·01	4415	170	0·23	8	1	0·001	3	8	0·01	1796	995	1·34	204	0·27	1038	1·40	375	0·50	953	1·28	433	0·58	1002	1·35	236	0·32	258	0·35	581	0·78	282	0·38	63	0·08	1921
771	63	0·08	3150	90	0·12	6	—	—	45	30	0·04	2485	981	1·27	337	0·44	826	1·07	172	0·22	1259	1·63	453	0·59	1738	2·25	517	0·67	300	0·39	442	0·57	302	0·39	95	0·12	1931
238	129	0·17	2280	84	0·11	7	1	0·001	37	21	0·03	2368	882	1·16	184	0·24	556	0·73	125	0·16	1287	1·69	465	0·61	1761	2·31	496	0·65	292	0·38	439	0·58	328	0·43	116	0·15	1932
0	48	0·06	2230	49	0·06	12	5	0·007	53	22	0·03	2527	824	1·09	532	0·70	579	0·76	102	0·13	1194	1·57	419	0·55	2090	2·76	502	0·66	269	0·35	409	0·54	335	0·44	100	0·13	1933
3	96	0·13	1565	37	0·05	17	1	0·001	45	22	0·03	1674	687	0·91	92	0·12	422	0·56	113	0·15	1273	1·69	488	0·65	1905	2·52	471	0·62	282	0·37	417	0·55	303	0·40	96	0 13	1934
7	99	0·13	1632	50	0·07	8	1	0·001	59	28	0·04	2480	765	1·02	222	0·30	485	0·65	74	0·10	1338	1·79	530	0·71	1979	2·65	373	0·50	258	0·34	444	0·59	286	0·38	99	0·13	1935
7	114	0·15	1457	52	0·07	32	1	0·001	72	38	0·05	2213	781	1·05	125	0·17	534	0·72	57	0·08	1256	1·69	472	0·63	2224	2·99	466	0·63	270	0·36	444	0·60	318	0·43	93	0·13	1936
550	44	0·06	1403	54	0·07	2	3	0·004	61	21	0·03	2427	742	1·01	308	0·42	475	0·64	64	0·09	1284	1·74	416	0·56	2315	3·14	440	0·60	261	0·35	419	0·57	307	0·42	70	0·10	1937
49	60	0·08	1075	13	0·02	13	—	—	64	19	0·03	1646	589	0·80	84	0·11	347	0·47	75	0·10	1316	1·80	511	0·70	2083	2·84	436	0·59	230	0·31	386	0·53	295	0·40	88	0·12	1938
574	—	—	1406	30	0·04	26	2	0·003	49	7	0·01	1324	411	0·59	160	0·23	427	0·61	62	0·09	1265	1·80	492	0·70	2311	3·29	470	0·67	258	0·37	357	0·51	376	0·54	91	0·13	1939
44	28	0·04	670	7	0·01	8	2	0·003	223	51	0·08	1785	551	0·89	198	0·32	1733	2·78	75	0·12	1242	2·00	825	1·33	2023	3·25	286	0·46	274	0·44	350	0·56	692	1·11	71	0·11	1940
69	20	0·03	4715	65	0·11	33	3	0·005	286	38	0·06	1809	548	0·91	105	0·17	1034	1·72	113	0·19	1259	2·09	780	1·30	1883	3·13	214	0·36	235	0·39	372	0·62	660	1·10	57	0·09	1941
8	17	0·03	1103	16	0·03	8	1	0·002	200	20	0·03	1402	364	0·60	51	0·09	823	1·37	93	0·15	1256	2·09	790	1·31	1938	3·22	238	0·40	233	0·39	379	0·63	297	0·49	50	0·08	1942
419	12	0·02	3277	42	0·07	14	4	0·007	107	14	0·02	1374	468	0·78	231	0·38	971	1·62	88	0·15	1280	2·14	741	1·24	1833	3·06	289	0·48	222	0·37	356	0·59	292	0·49	60	0·10	1943
736	9	0·01	2003	26	0·04	—	1	0·002	28	8	0·01	979	357	0·58	50	0·08	791	1·29	73	0·12	1286	2·09	827	1·35	1950	3·17	280	0·46	226	0·37	367	0·60	280	0·46	65	0·11	1944
96	8	0·01	1835	25	0·04	6	—	—	44	11	0·02	857	365	0·59	44	0·07	984	1·58	85	0·14	1297	2·08	874	1·40	1824	2·93	307	0·49	214	0·34	332	0·53	233	0·37	74	0·12	1945
0	3	0·00	2265	32	0·05	6	1	0·001	33	10	0·01	1040	399	0·60	105	0·16	893	1·34	169	0·25	1285	1·92	840	1·26	1882	2·81	377	0·56	211	0·32	454	0·68	237	0·35	54	0·08	1946
8	20	0·03	2308	18	0·03	123	11	0·016	23	8	0·01	770	452	0·66	36	0·05	880	1·28	229	0·33	1407	2·05	957	1·39	2146	3·13	402	0·59	224	0·33	437	0·64	227	0·33	67	0·10	1947
0	17	0·02	2612	19	0·03	25	4	0·006	20	8	0·01	825	353	0·51	16	0·02	801	1·16	58	0·08	1386	2·00	872	1·26	1917	2·77	406	0·59	196	0·28	312	0·45	206	0·29	77	0·11	1948
5	7	0·01	2749	29	0·04	35	8	0·012	29	8	0·01	783	396	0·57	108	0·15	943	1·35	60	0·09	1398	2·00	1010	1·60	2206	3·15	430	0·61	167	0·24	272	0·39	166	0·24	88	0·13	1949
3	9	0·01	4187	19	0·03	98	5	0·007	23	5	0·01	696	331	0·47	61	0·09	837	1·19	38	0·05	1405	1·99	1001	1·42	2585	3·68	328	0·47	91	0·13	309	0·44	208	0·30	67	0·10	1950
3	1	0·00	2255	3	0·00	23	2	0·003	27	5	0·01	709	412	0·59	257	0·37	1012	1·45	30	0·04	1507	2·15	1142	1·63	2766	3·95	339	0·48	81	0·12	287	0·41	218	0·32	81	0·12	1951
35	6	0·01	2635	8	0·01	35	1	0·001	23	2	0·00	521	336	0·48	24	0·03	741	1·05	22	0·03	1536	2·18	1108	1·56	2491	3·54	343	0·49	99	0·14	300	0·42	215	0·30	75	0·11	1952
8	2	0·00	2112	4	0·01	11	—	—	33	6	0·01	576	338	0·48	102	0·15	791	1·13	9	0·01	1519	2·16	1151	1·64	2550	3·63	322	0·46	65	0·09	284	0·40	232	0·33	100	0·14	1953
44	3	0·00	1642	4	0·01	13	2	0·003	29	2	0·00	384	317	0·45	32	0·05	761	1·09	12	0·02	1568	2·24	1143	1·64	2517	3·60	332	0·47	53	0·08	294	0·42	186	0·27	86	0·12	1954
14	2	0·00	1106	2	0·00	29	1	0·001	22	3	0·00	366	413	0·60	34	0·05	790	1·14	7	0·01	1580	2·28	1224	1·77	2673	3·86	355	0·51	72	0·10	259	0·37	230	0·33	84	0·12	1955

INFECTIOUS DISEASES AND EPIDEMIOLOGY

The following figures indicate the causes of deaths from the more common ases:—

	Years	
	1950–54 average	1955
sles	4	2
ooping cough	8	2
rlet fever	—	1
htheria	1	—
uenza	95	34
umonia (all forms)	347	424
eric fever	—	—
rrhoeal disease	22	28
monary tuberculosis	277	130

sultations

Eleven consultation visits were made during the year by medical officers he Department, at the request of medical practitioners in the City, in nection with the diagnosis of cases of infectious disease in which the nature he illness was in doubt.

llpox

No case of smallpox occurred in Manchester during the year.

The last case of smallpox notified in the City was in 1946; a soldier who rned to this country from Rangoon and stayed temporarily at a Services in the town centre on demobilisation leave prior to travelling to his home lonmouthshire.

ination

The number of primary vaccinations against smallpox of infants remained y steady, although there was a slight decrease compared with the previous years. The proportion of children successfully vaccinated was 46·15 cent. (as compared with 47·51 per cent. in 1954 and 47·69 per cent. in). These figures are greater than those for the five years prior to 1953, the situation cannot be viewed with complacency and, with continued uasion and teaching by the medical and nursing staffs, it is hoped that the lts of the number of children vaccinated over the last three years will be tained, if not increased. When considering the following vaccination tables, tion is drawn to the fact that a delay sometimes occurs in the submission ompleted record forms by general practitioners of children vaccinated ng 1955, consequently record forms received to 31st January, 1956, have taken into account of such vaccinations and re-vaccinations performed e year ended 31st December, 1955.

nfant vaccination record forms received from general practitioners and welfare clinics were as follows:—

General practitioners	
imary	1,884
susceptible	96
Total	1,980

Child welfare clinics	
Primary	3,217
Insusceptible	361
Total	3,578

The numbers of children successfully vaccinated in each of the p
10 years, with percentages, are as follows:—

Year	Numbers of persons vaccinated					Numbers of live births	Percentag vaccinate under 1 y to live li
	under 1 year	1—4 years	5—14 years	15 years and over	Totals		
1946 ..	8,994	362			9,356	13,969	64·39
1947 ..	9,856	302			10,158	15,830	62·26
1948 ..	4,916	173			5,089	13,794	35·64
1949 ..	2,957	2,031	70	383	5,441	13,129	22·52
1950 ..	5,409	2,668	846	685	9,608	12,436	43·49
1951 ..	4,803	587	311	1,937	7,638	12,438	38·61
1952 ..	4,419	599	382	2,106	7,506	12,367	35·73
1953 ..	5,827	1,227	1,328	3,776	12,158	12,218	47·69
1954 ..	5,627	704	120	427	6,878	11,843	47·51
1955 ..	5,401	608	139	380	6,528	11,704	46·15

NOTE.—Percentages vaccinated under 1 year to live births for the years 1945 to 1948 were expressed in prev
reports as percentages of the uncorrected live births.

Diphtheria

Of the 16 persons admitted to hospital for observation, one case
accepted as diphtheria. The patient, a boy of 4 years was taken into a
hospital with suspected pneumonia, but as he had palatal paralysis, diphth
was diagnosed and he was subsequently transferred to the isolation hosp
It appears that the boy received an incomplete course of diphtheria immu
zation whilst living in the Midlands and had been in poor health before
family removed to Manchester two months prior to his admission to hosp
Routine swabs submitted for examination from the remainder of the fa
proved two sisters to be diphtheria "carriers."

The following figures show the number of cases notified and accepted
diphtheria each year for the last ten years.

Year	1946	1947	1948	1949	1950	1951	1952	1953	1954
Number of cases	259	80	43	22	22	10	7	7	None

Mortality

The case mortality in 1955 was *nil*.

Cases of notifiable infectious diseases other than tuberculosis classified in wards of the City

Estimated population		Dysentery	Typhoid fever	Paratyphoid fevers	Other food poisoning	Scarlet fever	Diphtheria	Erysipelas	Whooping cough	Measles	German measles	Meningococcal infections	Acute poliomyelitis		Encephalitis		Pneumonia				Smallpox	Malaria (contracted in England & Wales)	Ophthalmia neonatorum	Pemphigus neonatorum	Puerperal pyrexia	Total cases	Rates per 1,000 population in wards
													Paralytic	Non-paralytic	Acute infective	Post-infectious	Lobar	Broncho	Influenzal	Other							
692200	**Total for the City**	**1058**	**—**	**2**	**125**	**795**	**1**	**—**	**1106**	**6514**	**8268**	**22**	**14**	**15**	**—**	**—**	**225**	**57**	**15**	**69**	**—**	**—**	**39**	**2**	**447**	**18774**	**27·12**
	WARDS																										
21242	ALEXANDRA PARK	4	—	—	1	5	—	—	7	106	108	—	1	—	—	—	3	—	—	—	—	—	3	—	8	246	11·58
18146	ALL SAINTS	52	—	—	8	23	—	—	75	118	231	—	1	—	—	—	9	5	2	2	—	—	1	—	30	557	30·70
17201	ARDWICK	34	—	—	4	54	—	—	64	196	342	—	—	—	—	—	4	1	1	—	—	—	1	—	17	718	41·74
18402	BAGULEY	66	—	—	3	33	—	—	66	251	368	—	—	—	—	—	—	—	—	5	—	—	5	—	11	808	43·90
15404	BARLOW MOOR	15	—	—	2	2	—	—	5	42	83	—	—	1	—	—	4	—	—	1	—	—	1	—	4	160	10·39
17566	BENCHILL	80	—	—	2	31	—	—	30	131	138	1	1	2	—	—	15	1	—	1	—	—	1	—	5	439	24·99
18982	BESWICK	2	—	—	—	36	—	—	17	154	379	—	—	—	—	—	12	2	—	1	—	—	—	—	3	606	31·92
21731	BLACKLEY	27	—	—	2	19	—	—	23	361	326	1	1	1	—	—	7	—	1	2	—	—	—	—	6	777	35·76
22326	BRADFORD	11	—	—	2	8	—	—	54	226	415	1	—	—	—	—	13	2	—	1	—	—	—	—	7	740	33·15
21746	BURNAGE	2	—	—	1	8	—	—	1	93	89	—	—	—	—	—	1	1	—	—	—	—	—	—	7	203	9·34
13840	CHEETHAM	14	—	—	4	11	—	—	12	129	122	2	—	—	—	—	2	—	—	—	—	—	—	—	6	302	21·82
19774	CHORLTON-CUM-HARDY	2	—	—	5	12	—	—	15	166	165	—	—	—	—	—	4	—	—	—	—	—	7	—	5	381	19·27
13215	COLLEGIATE CHURCH	15	—	—	17	13	—	—	30	167	116	1	—	—	—	—	2	—	—	7	—	—	—	—	3	371	28·07
23078	CRUMPSALL	50	—	—	2	14	—	—	20	294	273	—	1	—	—	—	6	—	—	2	—	—	—	—	4	666	28·86
17431	DIDSBURY	4	—	—	2	7	—	—	7	186	101	—	—	—	—	—	2	—	1	—	—	—	—	—	10	320	18·36
22746	GORTON NORTH	3	—	—	—	48	1	—	47	242	286	—	—	—	—	—	3	7	1	3	—	—	—	—	11	652	28·66
17156	GORTON SOUTH	7	—	—	1	10	—	—	21	145	152	1	1	1	—	—	3	—	—	2	—	—	—	—	10	354	20·63
18023	HARPURHEY	27	—	—	3	13	—	—	12	126	196	1	—	1	—	—	1	—	—	1	—	—	—	—	6	387	21·47
17949	HUGH OLDHAM	25	—	—	2	14	—	—	10	279	288	1	1	—	—	—	11	2	—	3	—	—	2	—	10	648	36·10
18959	LEVENSHULME	7	—	—	—	10	—	—	6	72	112	—	—	—	—	—	—	2	—	—	—	—	1	—	6	216	11·39
19699	LIGHTBOWNE	28	—	—	3	15	—	—	27	295	138	1	—	—	—	—	4	—	1	—	—	—	1	—	5	518	26·30
15404	LONGSIGHT	16	—	—	2	13	—	—	18	83	148	—	—	—	—	—	4	—	—	1	—	—	—	—	8	293	19·02
14241	MILES PLATTING	8	—	—	3	13	—	—	16	176	205	—	—	1	—	—	10	4	—	—	—	—	—	—	6	442	31·04
18425	MOSS SIDE EAST	14	—	—	4	30	—	—	45	98	159	—	1	—	—	—	4	2	1	—	—	—	4	—	24	386	20·95
17512	MOSS SIDE WEST	10	—	—	1	10	—	—	9	137	106	—	1	—	—	—	3	—	—	1	—	—	—	—	12	290	16·56
20283	MOSTON	74	—	—	10	26	—	—	32	240	355	—	—	—	—	—	6	1	—	13	—	—	—	1	3	761	37·52
13771	NEW CROSS	43	—	—	1	13	—	—	8	149	299	—	2	—	—	—	17	6	—	2	—	—	—	—	9	549	39·87
18566	NEWTON HEATH..	30	—	—	5	18	—	—	16	351	237	—	—	—	—	—	20	—	—	1	—	—	1	1	8	688	37·06
21020	NORTHENDEN	86	—	—	3	45	—	—	98	199	370	—	—	—	—	—	8	6	4	7	—	—	2	—	10	838	39·87
16749	OLD MOAT	4	—	—	—	8	—	—	12	90	143	—	—	—	—	—	3	2	—	—	—	—	1	—	11	274	16·36
22227	OPENSHAW	6	—	—	1	22	—	—	25	259	338	—	—	2	—	—	11	1	2	—	—	—	—	—	8	675	30·37
16756	RUSHOLME	9	—	—	5	21	—	—	21	69	125	1	—	1	—	—	1	1	—	—	—	—	1	—	10	265	15·82
18367	ST. GEORGE'S	33	—	—	7	28	—	—	64	161	173	5	1	1	—	—	6	2	1	2	—	—	—	—	18	502	27·33
17650	ST. LUKE'S	69	—	—	4	37	—	—	38	105	216	2	—	1	—	—	8	3	—	1	—	—	2	—	24	510	28·89
20897	ST. MARK'S	9	—	1	3	29	—	—	31	325	230	1	—	1	—	—	4	2	—	—	—	—	1	—	6	643	30·77
10978	ST. PETER'S	24	—	—	3	4	—	—	37	50	125	—	—	—	—	—	7	1	—	8	—	—	1	—	3	263	23·96
15239	WITHINGTON	2	—	1	5	15	—	—	2	64	98	1	—	—	—	—	3	1	—	2	—	—	2	—	8	204	13·39
19499	WOODHOUSE PARK	146	—	—	4	77	—	—	85	179	513	2	2	2	—	—	4	2	—	—	—	—	1	—	8	1025	52.57
	HOSPITALS AND INSTITUTIONS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	97	97	

Primary vaccinations—year ended 31st December, 1955

Month	General practitioners										Hospitals										Medical officers and child welfare centres										Totals										Grand Totals	
	0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+			
	*P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S
January	190	181	11	11	11	11	13	12	44	44	20	20	1	1	1	1	—	—	4	4	334	301	17	14	36	34	1	1	1	1	544	502	29	26	48	46	14	13	49	49	684	636
February	136	133	5	5	8	8	11	11	36	36	26	26	—	—	—	—	—	—	—	—	267	246	14	14	26	26	1	1	1	1	429	405	19	19	34	34	12	12	37	37	531	507
March	185	182	3	3	6	6	7	7	37	36	23	23	—	—	—	—	—	—	1	1	334	315	8	8	30	30	1	1	2	2	542	520	11	11	36	36	8	8	40	39	637	614
April	170	166	8	8	14	14	9	9	35	35	17	17	1	1	1	1	—	—	1	1	318	298	15	14	24	23	—	—	—	—	505	481	24	23	39	38	9	9	36	36	613	587
May	195	190	7	7	15	15	24	24	41	39	25	25	—	—	—	—	1	1	—	—	287	274	11	11	19	18	—	—	1	1	507	489	18	18	34	33	25	25	42	40	626	605
June	171	162	12	11	10	10	8	8	34	34	27	26	2	2	—	—	—	—	—	—	393	354	13	13	22	19	—	—	3	3	591	542	27	26	32	29	8	8	37	37	695	642
July	156	145	14	14	15	14	16	16	28	28	42	42	—	—	1	1	—	—	—	—	268	237	16	15	24	22	1	1	3	3	466	424	30	29	40	37	17	17	31	31	584	538
August	120	111	5	5	1	—	7	7	12	11	29	29	1	1	—	—	—	—	—	—	321	274	10	9	17	14	1	1	—	—	470	414	16	15	18	14	8	8	12	11	524	462
September	214	191	15	15	15	15	11	10	32	32	40	40	—	—	—	—	—	—	—	—	357	306	19	17	18	17	—	—	—	—	611	537	34	32	33	32	11	10	32	32	721	643
October	177	167	8	7	10	10	2	2	23	22	21	21	2	2	—	—	—	—	3	3	328	293	14	14	11	11	—	—	—	—	526	481	24	23	21	21	2	2	26	25	599	552
November..	148	143	4	4	10	9	12	12	29	29	19	19	1	1	—	—	—	—	—	—	237	200	8	8	10	10	—	—	—	—	404	362	13	13	20	19	12	12	29	29	478	435
December	118	113	7	7	15	15	15	15	14	14	12	12	1	1	1	1	—	—	—	—	134	119	3	2	8	8	—	—	—	—	264	244	11	10	24	24	15	15	14	14	328	307
Total ..	1,980	1,884	99	97	130	127	135	133	365	360	301	300	9	9	4	4	1	1	9	9	3578	3217	148	139	245	232	5	5	11	11	5,859	5,401	256	245	379	363	141	139	385	380	7,020	6,528

Re-vaccinations—year ended 31st December, 1955

Month	General practitioners										Hospitals										Medical officers and child welfare centres										Totals										Grand Totals	
	0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+			
	*P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S
January	—	—	1	1	1	1	2	2	54	51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	2	—	—	1	1	1	1	3	3	56	53	61	58
February	—	—	1	1	1	1	5	5	104	81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	—	—	1	1	1	1	5	5	108	85	115	92
March	—	—	—	—	8	8	8	7	87	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	4	4	—	—	—	—	9	8	8	7	91	84	108	99
April	—	—	—	—	2	2	5	5	65	63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	2	—	—	—	—	2	2	6	6	67	65	75	73
May	—	—	—	—	2	2	4	4	73	71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	2	2	4	4	74	72	80	78
June	—	—	—	—	2	2	14	14	65	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	107	107	—	—	—	—	2	2	14	14	172	167	188	183
July	—	—	—	—	3	3	5	4	51	47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	1	1	80	80	—	—	—	—	5	5	6	5	131	127	142	137
August	—	—	1	1	5	5	2	2	32	29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	7	—	—	1	1	5	5	2	2	39	36	47	44
September	—	—	—	—	2	2	7	5	49	41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	13	9	—	—	—	—	2	2	8	6	62	50	72	58
October	—	—	—	—	3	2	15	15	56	50	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	3	3	—	—	1	1	3	2	15	15	59	53	78	71
November..	—	—	1	1	2	2	2	2	50	44	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	—	—	—	1	1	—	—	3	2	2	2	2	2	51	45	58	51
December	—	—	—	—	5	5	3	3	71	63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	5	5	3	3	72	64	80	72
Total ..	—	—	4	4	36	35	72	68	757	680	—	—	—	—	—	—	—	—	—	—	—	—	3	2	3	2	4	4	225	221	—	—	7	6	39	37	76	72	982	901	1104	1016

*P = Performed. S = Successful.

rriers" and the virulence test

Of the total number of swabs submitted for examination to the Public lth Laboratory, "C. *diphtheriae grown*" was given as the result in 11 cases, a virulence test carried out in each instance proved that the strain was of mitis type, 9 of which were virulent and 2 non-virulent. The 9 virulent es, who were removed to the isolation hospital, occurred amongst ldren in an establishment set up by the Children's Committee under t II of the Children's Act, 1948, to provide temporary residential accommoion for children received into their care. One boy aged 10 years, and two s aged 8 years and 7 years (all from one family) and one other boy, aged ears had not been immunized.

ply of anti-toxin

Under the National Health Service Acts, the responsibility for the provision diphtheria anti-toxin for use by general practitioners, when required, has n taken over by the Manchester Regional Hospital Board. Arrangements tinue for supplies of anti-toxin to be available at certain hospitals and fire ions in the City.

htheria immunization

It is important to ensure that the almost complete eradication of diphtheria ecent years is not interpreted by parents as an indication that immunization o longer necessary. With this in mind health visitors were instructed to lose a consent form with each primary record and to discuss immunization parents at their initial visit, and if possible, obtain consent there and , and return the completed form to the office. The unremitting efforts he health visitors in persuading parents to have their children immunized ears to have been rewarded when it is considered that there was an increase 28·3 per cent. in primary immunizations effected, compared with 1954. per cent. of the primary courses were given at child welfare centres, and per cent. by general practitioners, whilst 88 per cent. of the reinforcing ctions were given by the School Health Service.

The mobile immunization unit (Dr. Anne Doreen Lepine, M.R.C.S., L.R.C.P.—lical Officer) continued to tour all parts of the City, with special centration on those districts where facilities for immunization are inconently situated, and those where, in the past, the public have not taken ntage of the services available. During the year the unit was responsible the complete immunization of 3,347 children (an increase of 744 on 1954) 25·51 per cent. of the total number of children immunized in the City.

3,119 Manchester persons received a complete course of diphtheria antigen tions; 635 others received an incomplete course and 10,888 were given inforcing injection. In addition, 262 non-Manchester residents received mplete course, and 367 a reinforcing injection. The numbers were ibuted as follows:—

Number of Manchester persons immunized and number of immunizations effected

	Numbers having received complete course of antigen	Numbers having received incomplete course of antigen	Numbers havi received reinfor course of antigen
Schools and school clinics ..	4,246	384	9,621
Child welfare centres	3,338	122	521
Day nurseries	304	5	41
Hospitals	494	7	159
Health Office	3	—	11
Mobile unit	3,347	85	97
General practitioners	1,361	32	402
Manchester persons immunized by outside authorities ..	26	—	36
Persons from outside authorities immunized in Manchester	262	—	367
Total Manchester persons immunized	13,119	635	10,888
Total immunizations effected in Manchester	13,355	635	11,219

8,880 children under five years of age and 4,158 children of school ag total of 13,038 children) completed a full course of immunization. At close of the year, 83·10 per cent of Manchester children had been immuni the percentages in age groups being 61·55 in the group 0–4 years and 94·7 the group 5–14 years.

Antigens used in immunizing Manchester pre-school and school children

Age group	Numbers having received complete course of injections	Antigens used		
		A.P.T.	T.A.F.	P.T.A.
Under 1 year	3,527	3,487	13	27
1—4 years	5,353	5,322	25	6
5—14 years	4,158	4,039	119	—
Totals—under 15 years ..	13,038	12,848	157	33

Although Schick testing is not practised as a routine in connection the greater part of the scheme, such tests were carried out largely among hos patients and staff. The number of primary tests performed during the yea persons not previously immunized was 16, of which 8 gave positive res and 8 negative. 173 posterior tests were carried out on persons previo immunized of which 22 gave positive and 151 negative results.

The following table illustrates the progress of the immunization sch since its inception :—

Numbers of Manchester persons, in age groups, having had a complete course of injections

	1928 to 1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	
Under 1 year	5382	915	740	503	1497	1761	2298	1767	2383	2540	3349	4582	4678	3863	3281	3411	3108	3495	3527	Total under 5 years at end of 1955 35328
1 year ..	7040	1228	965	912	1882	2411	3557	2927	4379	4202	3444	4747	3994	3222	4133	3931	3848	3243	3266	
2 years ..	5497	894	576	409	1295	1292	1567	342	1258	1517	574	1139	1134	837	842	1093	940	831	1161	
3 ,, ..	5385	824	476	272	1065	1140	1504	168	554	1045	280	369	439	405	462	541	461	360	496	
4 ,, ..	5551	856	475	238	1057	920	1710	145	342	600	202	220	189	207	420	466	398	331	430	
5 ,, ..	5965	866	464	192	1226	473	1747	182	264	333	100	132	116	170	444	603	583	511	598	Total 5–9 years 54759
6 ,, ..	6085	878	447	222	1241	379	2165	199	233	269	77	91	74	171	483	381	467	375	922	
7 ,, ..	5876	832	382	195	1215	236	1577	206	139	215	52	68	58	171	515	310	225	287	686	
8 ,, ..	5958	711	408	179	1137	176	931	106	101	189	43	63	33	141	640	337	199	170	494	
9 ,, ..	5581	583	336	162	1036	112	805	98	68	143	36	54	31	159	584	363	164	111	286	
10 ,, ..	5171	613	308	137	1050	117	864	97	87	86	28	37	23	216	749	380	198	105	348	Total 10–14 years 45531
11 ,, ..	4020	444	274	86	933	121	595	72	71	89	15	27	16	165	645	354	149	87	307	
12 ,, ..	3371	395	218	43	1038	131	465	32	67	61	22	18	7	186	702	426	160	78	207	
13 ,, ..	2778	396	259	39	502	100	436	33	50	36	11	15	5	145	747	398	166	90	159	
14 ,, ..	816	79	49	11	219	53	51	12	14	17	6	11	5	126	567	260	125	71	151	
15 years and over..	3256	240	102	105	309	221	298	139	210	155	112	108	47	60	155	68	75	80	81	Total 15 years & over 142635
Totals 1928-55	77732	10754	6479	3705	16702	9643	20570	6525	10220	11497	8351	11681	10849	10244	15369	13322	11266	10225	11319	278253

The totals at the end of 1955 indicate only approximately the immune population since no account is taken of any deaths that may have ensued amongst the immunized children.

Meningococcal infection

25 notifications were received. Of this number, 7 were from gener practitioners and these cases were removed to the isolation hospital; 4 we confirmed subsequently. 18 were notified from and treated in various hospita in the City, thus making a total of 22 confirmed cases of meningococ meningitis.

3 deaths occurred from the disease—a case mortality rate of 13·6 per ce as compared with 6·9 per cent. in 1954.

As regards seasonal prevalence, it will be observed from the followi table that 68 per cent. of the cases occurred in the first and second quarte of the year.

Cases of meningococcal infection in quarters of the year, age groups and sexes

	1st quarter		2nd quarter		3rd quarter		4th quarter		Totals
	M	F	M	F	M	F	M	F	M
Under 5 years	3	2	5	2	—		3	1	11
5— 9 ,, ...	—		—		1	1	—		1
10—14 ,, ...	—		—	1	—		—		—
15—19 ,, ...	—		—		—		—		—
20—24 ,, ...	—		1	—	—		—		1
25—34 ,, ...	—		—		—	1	—		—
35 and over	1	—	—		—		—		1
All ages	4	2	6	3	1	2	3	1	14

Poliomyelitis

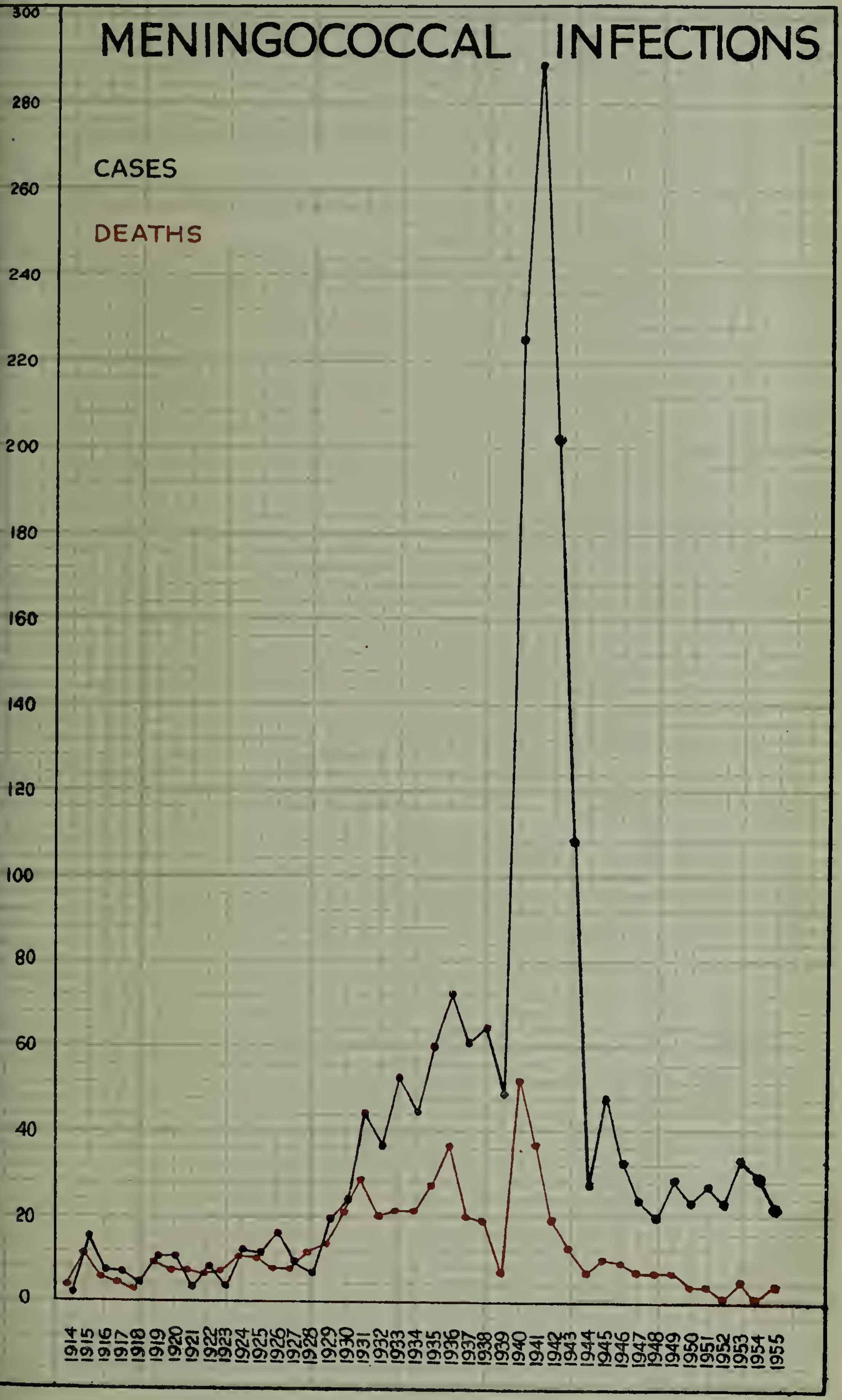
There was a slight increase in the incidence of poliomyelitis compared wi the previous two years. Of the 62 cases notified 14 were confirmed as paraly poliomyelitis and 15 non-paralytic with one death, as against 9 paralyt 4 non-paralytic and one death in 1954. As will be seen from the followi table, the disease showed its usual seasonal trend in the months of July, Aug and September, when 62 per cent. of the total cases occurred, against 46 p cent. in the corresponding period of 1954.

Months of onset of confirmed cases:—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Paralytic	—	—	—	—	—	1	4	3	1	2	1
Non-paralytic ..	—	—	—	—	—	—	4	5	1	3	1

The sex and age distributions of the cases were as follows :—

		-1	1-2	3-4	5-9	10-14	15-24	25 +	Tot
Paralytic	Male	—	2	4	2	—	—	1	
	Female	—	—	—	3	—	1	1	5
Non-paralytic	Male	—	—	—	5	2	2	—	
	Female	—	1	1	1	—	1	2	
Total	Male	—	2	4	7	2	2	1	
	Female	—	1	1	4	—	2	3	11


MENINGOCOCCAL INFECTIONS
CASES
DEATHS
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
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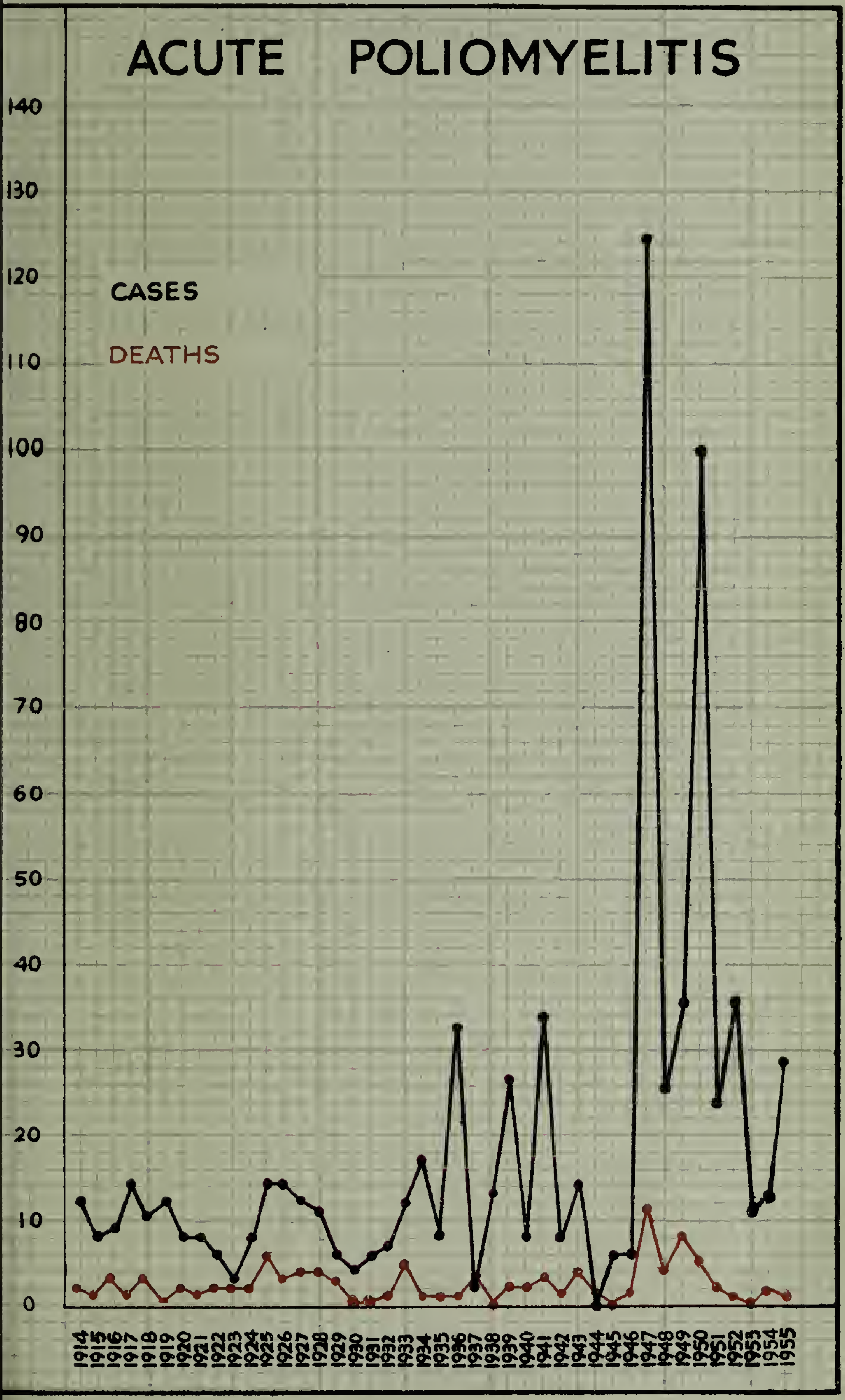
1954
1955


ACUTE POLIOMYELITIS
CASES
DEATHS
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955

The following table shows the incidence of poliomyelitis and deaths during the past five years:—

Age groups	Cases															Deaths														
	1955			1954			1953			1952			1951			1955			1954			1953			1952			1951		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Under 1 year	–	–	–	1	–	1	–	–	–	–	2	2	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1—2 years	2	1	3	2	–	2	1	1	2	4	5	9	2	1	3	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
3—4 years	4	1	5	1	–	1	1	1	2	1	6	7	1	7	8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5—9 years	7	4	11	2	2	4	1	–	1	6	3	9	2	2	4	1	–	1	–	–	–	–	–	–	1	–	1	–	–	–
10—14 years	2	–	2	1	–	1	1	–	1	1	–	1	–	1	1	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–
15—24 years	2	2	4	1	1	2	2	–	2	3	1	4	5	–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
25 and over	1	3	4	1	1	2	2	1	3	1	2	3	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Total	18	11	29	9	4	13	8	3	11	16	19	35	10	13	23	1	–	1	1	–	1	–	–	–	1	–	1	1	1	2

Particulars of the 29 cases are given below:—

Sex	Age	City ward	Onset	Notified	Site of paralysis	Condition—March, 1956
F.	8	Hugh Oldham ..	16th June	20th June	Right side of face	Recovered; no paralysis.
M.	1¾	All Saints	25th June	1st July	Left arm	Recovered; no paralysis.
M.	1½	Blackley	2nd July	11th July		Left the City.
F.	17	Woodhouse Park	1st July	14th July	None	Recovered; no paralysis.
F.	6	Alexandra Park	21st July	25th July	Right leg and shoulder	Recovered; no paralysis.
M.	5½	Openshaw.. ..	18th July	25th July	None	Recovered; no paralysis.
F.	7	Benchill	29th July	1st August		Left the City.
M.	14	Barlow Moor ..	28th July	2nd August	None	Recovered; no paralysis.
F.	2	Rusholme ..	31st July	9th August	None	Recovered; no paralysis.
M.	20	Benchill	5th August	9th August	None	Recovered; no paralysis.
M.	3½	Crumpsall.. ..	31st July	9th August	Left leg	Improving slowly; wears calipers.
M.	5	Openshaw.. ..	7th August	15th August	Left side of face	Slight paralysis of face; attending school
M.	10	St. Luke's.. ..	15th August	24th August	None	Recovered; no paralysis.
F.	19	St. George's ..	26th August	29th August	Right leg	Recovered; no paralysis.
M.	5	Benchill	28th August	31st August	Left leg	Recovered; no paralysis.
M.	15	St. Mark's ..	28th August	5th Sept.	None	Recovered; no paralysis.
F.	5¾	Moss Side East	12th August	5th Sept.		Left the City.
M.	7	Gorton South ..	1st Oct.	4th Oct.	—	Died.
F.	27	St. George's ..	30th Sept.	1st Oct.	None	Recovered; no paralysis.
M.	5	Gorton South ..	11th Oct.	13th Oct.	None	Recovered; no paralysis.
M.	3	Moss SideWest	16th Oct.	19th Oct.	None	Recovered; no paralysis.
F.	35	Harpurhey ..	11th Oct.	14th Oct.	None	Recovered; no paralysis.
F.	4	Blackley	19th Oct.	24th Oct.	None	Recovered; no paralysis.
M.	33	Woodhouse Park	29th Oct.	5th Nov.	Left leg and thigh	Very much improved; limps.
M.	9	Woodhouse Park	10th Nov.	14th Nov.	Abdominal muscles	Recovered; no paralysis.
F.	26	New Cross ..	14th Nov.	17th Nov.	Neck	Recovered; no paralysis.
M.	4	Woodhouse Park	16th Dec.	20th Dec.	Slight facial	Improving; slight paralysis.
M.	3½	New Cross ..	18th Dec.	24th Dec.	Right arm and hand	Improving; slight paralysis.
M.	5	Miles Platting ..	22nd Dec.	28th Dec.	Left ankle	Recovered; no paralysis.

Table showing the distribution of cases of poliomyelitis in City wards and the health of patients in March, 1956

CITY WARD	Notifications		Confirmed cases		Paralytic		Non-paralytic		Deaths		Condition—March, 1956				Unob-tained
											Paralytic		Recovered; no paralysis		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Alexandra Park	—	1	—	1	—	1	—	—	—	—	—	—	—	1	—
All Saints	1	—	1	—	1	—	—	—	—	—	—	—	1	—	—
Ardwick	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Baguley	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Barlow Moor	1	1	1	—	—	—	1	—	—	—	—	—	1	—	—
Benchill	2	1	2	1	1	—	1	1	—	—	—	—	2	—	1
Beswick	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Blackley	3	3	1	1	1	—	—	1	—	—	—	—	—	1	1
Bradford	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Burnage	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Cheetham	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chorlton-cum-Hardy ..	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Collegiate Church	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Crumpsall	2	—	1	—	1	—	—	—	—	—	1	—	—	—	—
Didsbury	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gorton North	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gorton South	3	—	2	—	1	—	1	—	1	—	—	—	1	—	1
Harpurhey	—	1	—	1	—	—	—	1	—	—	—	—	—	1	—
Hugh Oldham	—	1	—	1	—	1	—	—	—	—	—	—	—	1	—
Levenshulme	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lightbowne	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Longsight	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Miles Platting	3	—	1	—	—	—	1	—	—	—	—	—	1	—	—
Moss Side East	—	1	—	1	—	1	—	—	—	—	—	—	—	—	1
Moss Side West	2	2	1	—	1	—	—	—	—	—	—	—	1	—	—
Moston	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Cross	2	1	1	1	1	1	—	—	—	—	1	—	—	1	—
Newton Heath	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Northenden	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Old Moat	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Openshaw..	2	1	2	—	—	—	2	—	—	—	1	—	1	—	—
Rusholme	—	3	—	1	—	—	—	1	—	—	—	—	—	1	—
St. George's	—	3	—	2	—	1	—	1	—	—	—	—	—	2	—
St. Luke's	2	—	1	—	—	—	1	—	—	—	—	—	1	—	—
St. Mark's	1	1	1	—	—	—	1	—	—	—	—	—	1	—	—
St. Peter's	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Withington	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Woodhouse Park	5	2	3	1	2	—	1	1	—	—	2	—	1	1	—

Acute encephalitis (infective—post-infectious)

One case of suspected acute encephalitis (infective) was received, the diagnosis of which was subsequently amended to meningitis.

Pneumonia

There were 366 cases of pneumonia notified, consisting of:—

Primary pneumonia	lobar	225	366
	lobular	57	
	unclassified	69	
Influenzal pneumonia		15	

Investigations were carried out in the majority of the cases; 110 of them were treated in hospital.

There were 413 deaths, 68 lobar, 320 lobular and 25 unclassified. In addition, there were 11 deaths from influenza associated with pneumonia.

Malaria

No notification was received.

Anthrax

No case of anthrax came to the notice of the Department.

Measles and German measles

The reported number of cases of measles decreased from 9,844 recorded in 1954, to 6,514 cases in 1955. Of this total, 5,087 or 78 per cent. occurred in the first quarter of the year.

Cases notified	1955				
	1st quarter	2nd quarter	3rd quarter	4th quarter	Totals
MEASLES—					
By medical practitioners	4,639	857	305	123	5,924
,, others (parents, health visitors and school authorities) ..	448	79	54	9	590
Totals	5,087	936	359	132	6,514
GERMAN MEASLES—					
By medical practitioners	1,617	5,024	1,032	131	7,804
,, others (parents, health visitors and school authorities) ..	55	286	120	3	464
Totals	1,672	5,310	1,152	134	8,268

Whooping cough

Whooping cough became compulsorily notifiable in October, 1939; before this date the source of notification was solely from the schools. 1,106 cases of whooping cough were notified; this figure is the lowest recorded in the past 13 years.

1st quarter	2nd quarter	3rd quarter	4th quarter	Total
232	192	401	281	1,106

Incidence of whooping cough at age periods 0—5 and 5 years and over

Disease	Under 5 years	5 years and over	Total
Whooping cough	753	353	1,106

Whooping cough immunization

There was a decrease of 357 in the number of children who received a complete course of immunization against whooping cough compared with 1954, and an increase of 388 over the figure for 1953, when this service was introduced at the beginning of that year. It will be observed from the following table that 87·4 per cent. of the total immunizations were carried out at child welfare centres and day nurseries, against 84·7 in 1954, and 89 per cent. in 1953.

During the year, 4,012 children received a full course of 3 injections as compared with 4,369 in the previous year; 444 were given reinforcing doses as against 445 in 1954.

The total numbers of children, in age groups, who received complete courses in 1954 and 1955

Age	Welfare centres		General practitioners		Day nurseries		Hospitals		Health Office		Totals	
	1954	1955	1954	1955	1954	1955	1954	1955	1954	1955	1954	1955
Under 1	2,532	2,533	376	296	30	16	—	—	2	1	2,940	2,846
1—2	683	519	211	126	64	91	—	—	3	4	961	740
2—3	149	146	32	45	57	48	—	—	2	3	240	242
3—4	75	85	24	22	43	24	—	—	—	—	142	131
4—5	49	37	15	10	20	6	—	—	2	—	86	53
	3,488	3,320	658	499	214	185	—	—	9	8	4,369	4,012

The total numbers of children, in age groups, who received reinforcing injections in 1954 and 1955

Age	Welfare centres		General practitioners		Day nurseries		Hospitals		Health Office		Totals	
	1954	1955	1954	1955	1954	1955	1954	1955	1954	1955	1954	1955
Under 1 ..	—	—	—	—	—	—	—	—	—	—	—	—
1—2	—	—	1	—	—	—	—	—	—	—	1	—
2—3	2	—	1	5	—	—	—	—	1	—	4	5
3—4	88	107	4	4	—	2	2	1	—	—	94	114
4—5	335	309	9	12	1	3	—	—	1	1	346	325
	425	416	15	21	1	5	2	1	2	1	445	444

Typhoid and paratyphoid fever

Three suspected cases of typhoid fever were notified and removed to the isolation hospital where they were finally diagnosed as not suffering from this disease. Four notifications of paratyphoid fever were received and two subsequently withdrawn. The remaining two cases, a boy aged 6 years, and a woman aged 24 years, were confirmed as paratyphoid fever; the organisms in faeces of the boy belonged to phage Type Beccles, and that of the woman phage Type 3A.

Dysentery

During the year, 1,178 cases of dysentery were notified or otherwise ascertained; in 120 instances the diagnosis was altered, and of the remaining 1,058, which was more than double the figure for the previous year, 1,018 were confirmed bacteriologically as: *Sh. sonnei*, 1,006, *Sh. flexneri*, 9, *Sh. newcastle*, 2 and *amoebic*, 1, the remainder being notified on clinical grounds only.

The following table shows corrected notifications by quarters of the year and by sex:—

	Males	*Females*	*Totals*
1st quarter	276	221	497
2nd quarter	188	212	400
3rd quarter	54	47	101
4th quarter	23	37	60
Totals	541	517	1,058

The notifications were almost equally divided between the sexes, 541 males and 517 females, and those relating to children under 15 years of age accounted for 78 per cent. of the total.

Classification of cases of dysentery in various age groups are as follows:—

Age group	*Males*	*Females*	*Totals*
Under 5 years	254	220	474
5—14 years	200	152	352
Totals	454	372	826
15 years and over	87	145	232
Totals	541	517	1,058

Scarlet fever

795 cases of scarlet fever were notified; 121 or 15 per cent. of the cases were hospitalized and case mortality was 0·13.

International certificates of vaccination

Under the International Sanitary Regulations, 1952, certificates of vaccination and inoculations issued to travellers and signed by doctors practising in the City are required to be checked, stamped and countersigned in the Department; 2,503 such certificates were dealt with.

Food poisoning

	No. of outbreaks	*No. of cases*	*Single cases*	*Remarks*
	20	181		Agent identified
	10	51		Agent unknown
			68	Agent identified
			16	Agent unknown
Totals	30	232	84	

316

Summary: No. notified 125
No. ascertained 191
Total 316

Brief details of the cases are contained in the following schedule of food poisoning incidents copied in the suggested form for annual returns to the Minister of Health as in Appendix D (ii) of the revised memorandum 188-Med. 1949 :—

Summary of f

Cases where ca

Outbreak caused by		Cases		Illness—clinical features			
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity	Durati
1. Not known ..	S. typhimurium	4	—	—	Common cold, diarrhoea, blood in stools	Mild	7 da
2. Not known ..	do.	1	—	—	Headache and diarrhoea ..	Mild	3 da
3. Not known ..	do.	6	—	—	Vomited, pyrexia, anorexia, abdominal pain	Moderate	Hosp alize
4. Not known ..	do.	1	—	—	Vomited, abdominal pains ..	Mild	Few d
5. Not known ..	do.	1	—	—	Diarrhoea, pyrexia, catarrh ..	Mild	3 da
6. Not known.. ..	do.	1	—	—	Vomited, diarrhoea, languid, pyrexia	Moderate	Hosp alize
7. Not known.. ..	do.	1	—	—	Abdominal pain, diarrhoea, pyrexia	Moderate	do
8. Not known.. ..	do.	1	—	—	Diarrhoea, anorexia, vomited	Mild	4 da
9. Not known.. ..	do.	2	—	—	Diarrhoea, abdominal pain ..	Mild	Few d
10. Not known.. ..	do.	—	1	—	Pyrexia, abdominal pain ..	Mild	Hosp alize
11. Not known.. ..	do.	3	—	—	Languid, vomited, diarrhoea, abdominal pain	Moderate	Hosp alize
12. Not known.. ..	do.	2	—	—	Abdominal pain, diarrhoea, pyrexia	1 moderate 1 mild	Hosp alize
13. Not known.. ..	do.	1	—	—	Diarrhoea	Mild	Few
14. Not known.. ..	do.	1	—	—	Diarrhoea, abdominal pain, pyrexia, vomited	Moderate	Few
15. Not known.. ..	do.	1	—	—	Abdominal pain, pyrexia, vomited, diarrhoea	Moderate	Hos aliz
16. Wild duck eggs ..	do.	3	—	13 hrs.	Abdominal pain, diarrhoea, vomited, pyrexia	Moderate	5 d
17. Not known.. ..	do.	1	—	—	Nausea, abdominal pain, diarrhoea	Moderate	7 d
18. Not known.. ..	do.	1	—	—	Diarrhoea	Mild	2–3
19. Not known.. ..	do.	1	—	—	Childbirth, pyrexia, diarrhoea	Moderate	Hos aliz
20. Not known.. ..	do.	1	—	—	Abdominal pain, diarrhoea, pyrexia	Moderate	7 d
21. Not known.. ..	do.	1	—	—	Nausea, diarrhoea, abdominal pain	Moderate	10 d
22. Not known.. ..	do.	—	1	—	Headache, pyrexia, abdominal pain	Moderate	Hos aliz

ning 1955

ts were identified

Results of laboratory investigations							
es al nens)	Food samples	Food handlers (faecal specimens)	Other (faecal specimens)	Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
ve	—	—	4—negative	—	Home	8	Not known.
ve	—	—	2—negative	—	Home	3	do.
ve	—	—	—	—	Home	6	do.
ve	—	—	3 — negative	—	Home	4	? Tinned lobster.
ve	—	—	3 — negative	—	Home	4	Not known.
ve	—	—	3 — negative	—	Home	4	do.
ve	—	—	2 — negative	—	Home	4	? Lightly boiled hen eggs.
ve	—	—	4— negative	—	Home	1	? Fried hen eggs.
ve	—	—	1 — negative	—	Home	3	Not known.
ve	—	—	—	Hospital	Hospital	—	Entered hospital for ear abscess a week before illness.
ve	—	—	3 — negative	—	Home	6	Not known
ve	—	—	1 +ve dysentery 1 — negative	—	Home	4	? Hen eggs.
ve	—	—	2 — negative	—	Home	3	Not known.
ve	—	—	4 — negative	—	Home	7	do.
ve	—	—	3 — negative	—	Home	4	do.
ve	—	—	26 duck eggs—(2 shells +ve) 5 duck egg shells - (1 +ve) 13 ducks faeces (4 +ve)	Cooked at home	Home	3	Eggs of wild ducks " poached " from lake island of public park.
ve	—	—	—	—	Home	2	Not known.
ve	—	—	—	—	Home	2	do.
ve	—	—	—	—	Hospital and home	—	do.
ve	—	—	3 — negative	—	Home	4	do.
ve	—	—	4 — negative	—	Home	7	do.
ve	—	—	—	—	Touring holiday, Cornwall and Devon	?	do.

Outbreak caused by		Cases			Illness—clinical features		
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity	Durati
23. Not known.. ..	S. typhimurium	1	—	—	Malaise, diarrhoea, pyrexia, vomiting	Moderate	7-10 d
24. Not known.. ..	do.	1	—	—	Diarrhoea	Mild	7 day
25. Not known.. ..	do.	—	1	—	Pyrexia, diarrhoea..	Mild	Hospi alize
26. Not known.. ..	do.	1	—	—	Diarrhoea, vomited	Mild	Hosp alized
27. Not known.. ..	do.	1	—	—	Languid, diarrhoea	Mild	Hosp alize
28. Not known.. ..	do.	1	—	—	Headache, diarrhoea	Mild	Few da
29. Not known.. ..	do.	1	—	—	Pyrexia	Mild	Few d
30. Not known.. ..	do.	4	—	—	Abdominal pain, diarrhoea, headache, vomited	Moderate	Few d
31. Not known.. ..	do.	1	—	—	Diarrhoea, vomited	Mild	Hospit alize
32. Not known.. ..	do.	—	1	—	Abdominal pain, pyrexia, diarrhoea	Moderate	Hospi alize
33. Not known.. ..	do.	—	1	—	Diarrhoea, abdominal pain, vomited	Moderate	Hospi alize
34. Not known.. ..	do.	1	—	—	Diarrhoea, abdominal pain ..	Mild	Few d
35. Not known.. ..	do	—	2	—	Diarrhoea, vomited, prostration; 1 symptomless	Moderate 1 mild	1 hospita
36. Not known.. ..	do.	1	—	? 4hrs.	Pyrexia, diarrhoea, vomited..	Mild	Few d
37. Not known.. ..	do.	3	—	—	Diarrhoea, abdominal pain, vomited, leg rash, pyrexia; 1 headache only; 1 symptomless	Mild	Few d.
38. Roast pork	do.	2	—	11 hrs.	Diarrhoea	Mild	Hospi alize
39. Not known.. ..	do.	—	1	—	Headache, diarrhoea, vomited, abdominal pain	Moderate	Hospi alize
40. Not known.. ..	do.	1	—	—	Diarrhoea, vomited	Mild	Few d
41. Not known.. ..	do.	1	—	—	Diarrhoea, vomited, associated with pregnancy	Mild	Hospi alize
42. Not known.. ..	do.	2	—	—	Vomited, abdominal pain, headache, abortion case and ? meningitis	Moderate	Hospit alize
43. Not known.. ..	do.	4	—	—	Headache, abdominal pain, pyrexia, diarrhoea; 1 symptomless	Mild	Few d
44. Not known.. ..	do.	1	—	—	Malaise, headache, vomited, diarrhoea, pyrexia, cramp	Mild	Few d
45. Not known.. ..	do.	1	—	—	Vomited, diarrhoea, abdominal pain	Moderate	Hosp alize
46. Not known.. ..	do.	1	—	—	Puerpural fever	Mild	Hospi alize
47. Not known.. ..	do.	—	1	—	Head and backache	Mild	Hosp alize

Results of laboratory investigations				Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
s al ens)	Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
e	—	—	—	—	Restaurants and cafes visited generally	?	Not known
e	—	—	—	—	Home	4	do.
e	—	—	3 — negative	—	Home	1	? Lightly boiled hen eggs.
e	—	—	—	—	Home	3	Not known.
e	—	—	—	—	Home	5	do.
e	—	—	—	—	Home	3	do.
e	—	—	—	—	Home	6	do.
e	—	—	—	—	Home	7	do.
e	—	—	2— negative	—	Hospital	1	Hospitalized for spine condition.
e	—	—	3 — negative	—	Home	4	Not known.
e	—	—	4 — negative	—	Home	6	do.
e	—	—	2 — negative	—	Home	3	do.
e	—	—	2 — negative	—	Home	4	Not known.
e	—	—	2 — negative	—	Home	3	? Artificial cream.
e	—	—	3 — negative	—	Home	7	Illness occurred in two visitors before onset in patients of these cases.
e	—	—	—	—	Relative's home in neighbouring town	?	Not known.
e	—	—	—	—	Home	5	do.
e	—	—	—	—	Schoolmaster in Manchester on vacation when symptoms occurred	?	do.
e	—	—	6 — negative	—	Home	6	do.
e	—	—	2 — negative	—	Visited seaside resort prior to illness	?	do.
e	—	2 — negative	—	—	Illness occurred when on holiday at seaside	?	Patients said to have knowledge of waitress excluded on account of food poisoning.
e	—	—	3 — negative	—	do.	?	Not known.
e	—	—	—	—	Home	1	? Uncooked hen eggs in milk.
e	—	—	—	—	? Hospital	?	Not known.
e	—	—	—	—	Home	5	do.

Outbreak caused by		Cases		Illness—Clinical features			
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity	Durat
48 Not known	S. typhimurium	1	—	—	Diarrhoea	Mild	Hos aliz
49. Not known.. ..	do.	1	—	—	Diarrhoea	Mild	Few
50. Not known.. ..	do.	1	—	—	Diarrhoea	Mild	Few
51 Not known	do.	1	—	—	Diarrhoea, pyrexia, abdominal pain, nausea	Mild	Few
52. Not known.. ..	do.	1	—	—	Abdominal pain, diarrhoea, pyrexia	Moderate	Hos aliz
53. Not known.. ..	do.	1	—	—	—	—	Hos aliz
54. Not known.. ..	do.	1	—	—	Diarrhoea, vomited	Mild	Few
55. Not known.. ..	do.	1	—	—	Diarrhoea	Mild	Few
56. Not known.. ..	do.	1	—	—	Diarrhoea, abdominal pain, vomited	Moderate	Few
57. Not known.. ..	do.	2	—	—	Loose motion—blood present, vomited, languid; 1 symptomless	Moderate	Few
58. Not known.. ..	do.	1	—	—	Diarrhoea, abdominal pain ..	Mild	Few
59. Not known.. ..	do.	1	—	—	Diarrhoea, abdominal pain ..	Mild	Few
60. Not known.. ..	do.	1	—	—	Diarrhoea, vomited	Moderate	Hos aliz
61. Not known . ..	do.	1	—	—	—	—	Hos aliz
62. Not known.. ..	do.	—	1	—	—	—	Hos aliz
63. Not known.. ..	do.	1	—	—	—	—	—
64. Not known.. ..	do.	1	—	—	—	—	—
65. Not known.. ..	do.	—	1	—	Abdominal pain, diarrhoea ..	Moderate	Hos aliz
66. Not known.. ..	do.	1	—	—	Diarrhoea, vomited, abdominal pain, pyrexia	Mild	Few
67. Not known.. ..	do.	1	—	—	Diarrhoea	Mild	Few
68. Not known.. ..	do.	—	1	—	Diarrhoea, abdominal pain, cough, chest condition	Moderate	Ho ali
69. Not known.. ..	S. derby	1	—	—	Shivers, diarrhoea, vomited, pyrexia	Moderate	Ho ali
70. Not known.. ..	do.	1	—	—	Diarrhoea	Mild	Few
71. Not known.. ..	S. niloese	1	—	—	Symptomless	Mild	Few
72. Not known.. ..	S. heidelberg	2	—	—	Diarrhoea, vomited; 1 symptomless	Moderate	Few
73. Not known.. ..	do.	—	1	—	Vomited, diarrhoea, abdominal pain	Mild	Ho ali
74. Not known.. ..	do.	1	—	—	Abdominal pain, diarrhoea, pyrexia	Moderate	Ho aliz
75. Not known.. ..	do.	—	1	—	—	—	Ho ali
76. Not known.. ..	do.	—	1	—	—	—	Ho aliz
77. Not known.. ..	do.	—	1	—	—	—	Ho aliz

Results of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
—	—	—	—	? Hospital	7	Not known
—	—	—	—	Hotel	? 2	On seaside holiday.
—	—	—	—	Home	3	Not known.
—	—	4 — negative	—	Home	5	do.
—	—	3 — negative	—	Home	4	do.
—	—	—	—	Hospital	?	do.
—	—	—	—	Home	6	do.
—	—	—	—	Home	3	do.
—	—	2 — negative	—	Home	4	do.
—	—	1 — negative	—	Home	3	Not known. Premature baby.
—	—	4 — negative	—	Home	5	Not known.
—	—	—	—	Home	4	do.
—	—	—	—	? Hospital	?	In hospital for ? bowel infection and pneumonia.
—	—	—	—	Hospital	?	Not known.
—	—	—	—	Children's hospital	?	do.
—	—	—	—	Home	?	do.
—	—	—	—	Home	?	do.
—	—	—	—	Home	5	do.
—	—	1 — negative	—	Home	6	do.
—	—	—	—	Home	4	do.
—	—	—	—	Home	3	Not known.
—	—	—	—	? Seaside holiday address	?	do.
—	—	5 — negative	—	Home	6	do.
—	—	—	—	? Home	5	Found as a result of specimen *re* dysentery obtained in a day nursery.
—	—	1 — negative	—	Home	3	Not known.
—	—	—	—	Home	5	do.
—	—	—	—	Home	4	do.
—	—	—	—	Home	—	do.
—	—	—	—	Home	—	do.
—	—	—	—	Hospital	?	Member of hospital staff.

Outbreak caused by		Cases		Illness—clinical features			
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity	Durati
78. Not known.. ..	S. heidelberg	—	1	—	—	—	Hospi alize
79. Not known.. ..	S. stanley	2	—	—	Loose stools	Mild	Few d
80. Not known.. ..	S. thompson	1	—	—	Diarrhoea, abdominal pain ..	Moderate	Hosp alize
81. Not known.. ..	do.	3	—	—	Diarrhoea	Mild	Few d
82. Not known.. ..	S. dublin	—	1	—	Diarrhoea, and vomited ..	Mild	Few d
83. Not known.. ..	S. enteritidis var, jena	2	—	—	Anorexia, pyrexia, vomited, diarrhoea, abdominal pain; 1 symptomless	Moderate	Hosp alize
84. Not known..	S. cubana	1	—	—	Loose stools, senility, chronic bronchitis	Moderate	In nu hon
85. Not known.. ..	S. bredeney	1	—	—	Anorexia, pyrexia, abdominal pain, diarrhoea, vomited	Moderate	2 mo
86. Meat, potato, salad, boiled egg	Proteus species, coliforms and spore bearing aerobes	3	—	—	Diarrhoea, pyrexia, cramp, vomited	Mild	Few
87. Roast beef, gravy..	Clostridium welchii	—	100	12-14 hrs.	Abdominal pain, diarrhoea, nausea, general weakness	Mild	Few
88. Roast turkey, stuffing	do.	—	30	12-13hrs.	do.	Mild	Few

Results of laboratory investigations				Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
ns)	Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
	—	—	—	—	Hospital	?	? Hospital infection.
	—	—	—	—	Home	4	Not known.
	—	—	5 — negative	—	Home	6	do.
	—	—	2 — negative	—	Home	8	do.
	—	—	—	—	Caravan	3	Inmate of one of a number of caravans where outbreak of flexner dysentery was being investigated.
	—	—	2 — negative 1 mouse excreta +ve 1 white mouse post-mortem +ve	—	Home	4	Pet white mouse.
	—	—	—	—	?	?	Illness on admission to nursing home.
	—	—	4 — negative	—	Home	5	Not known.
	—	—	Meat, potato, salad, boiled egg, +ve	—	Hotel	14	Handling in hotel.
	1 +ve 7 — negative	12 +ve 5 — negative	—	Canteen	Canteen	160	Canteen kitchen.
	2 +ve 6 — negative	4 +ve 1 — negative	—	Canteen	Canteen	100	do.

continued overleaf

Cases where causal age

Outbreak caused by	Cases		Illness—clinical features			
Food	Notified	Ascertained	Average incubation	Main symptoms	Severity	Dura
89. Not known..	3	1	—	Vomited, slight nausea ..	Mild	Few
90. Not known..	1	—	—	Nausea, swollen neck, vomited, diarrhoea, face rash, pyrexia	Moderate	5–6 d
91. Not known..	—	4	—	Diarrhoea, and discomfort ..	Mild	Few
92. Not known..	—	9	—	Sickness	Mild	Few h
93. Not known..	—	10	2½–18 hrs.	Abdominal pain, nausea, vomited	Mild	—
94. Not known..	—	5	—	1 abdominal pain, 2 vomited and diarrhoea, 2 rashes	Mild	Few
95. Not known..	1	—	—	Abdominal pain, diarrhoea, vomited	Moderate	Hos aliz
96. Not known..	2	—	—	Diarrhoea, vomited, abdominal pain	Mild	2 d
97. Not known..	2	—	—	Diarrhoea, vomited	Moderate	4–5
98. Not known..	2	—	—	Nausea, malaise, vomited, diarrhoea	Moderate	4–5
99. Not known..	—	1	—	Vomited, diarrhoea	Moderate	Ho ali
100. Not known..	1	—	—	—	Mild	Not
101. Not known..	1	—	—	—	—	-
102. Not known..	1	—	—	Pyrexia, vomited	Mild	Not
103. Not known..	1	—	—	Abdominal pain, diarrhoea ..	Mild	Few
104. Not known..	1	—	—	Diarrhoea, vomited	Moderate	Few
105. Not known..	1	—	—	Rash on body and face.. ..	Mild	Few
106. Not known..	1	—	—	Anorexia, vomited, diarrhoea	Mild	Few
107. Not known..	1	—	—	Abdominal pain, nausea, vomited, diarrhoea, pyrexia	Mild	Few
108. Not known..	—	8	2½–3 hrs.	Abdominal pain, vomited, some diarrhoea	Mild	Few
109. Not known..	1	—	—	Abdominal pain, diarrhoea, rash on body, arms, legs	Mild	Few
110. Not known..	1	—	—	Shivering, vomited, diarrhoea, pyrexia	Mild	Few
111. Not known..	—	1	—	Diarrhoea, vomited	Moderate	H a
112. Not known..	1	—	—	—	—	
113. Not known..	1	—	—	Abdominal pain, diarrhoea, anorexia, vomited, rash, eruption on body	Mild	H al
114. Not known..	1	4	—	Diarrhoea (1 vomited)	Mild	1

ere not found

Results of laboratory investigations				Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Cases aecal cimens)	Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
+ve anty owth ureus	—	2 — negative	—	—	Home	4	Not known.
— ative	—	—	1 — negative	—	Home	3	do.
—	—	—	—	—	Canteen	4	? Beetroot.
— ative	—	—	—	—	School	—	Not known.
— ative	3 — negative	—	—	School central kitchen	School canteen	94	do.
— tive	—	—	—	School central kitchen	School canteen	—	Piece of outer skin found in a meal.
— tive	—	—	—	—	Home	4	Not known (fish porter).
— tive	—	—	2 — negative	—	Home	4	Not known.
— tive	—	—	—	—	On day's outing to seaside resort	—	do.
— tive	—	—	—	—	Associated outbreak with no. 97	—	do.
— ive	—	—	2 — negative	—	Home	3	do.
-	—	—	—	—	—	—	do.
-	—	—	—	—	—	—	do.
	—	—	—	—	—	—	do.
	—	—	—	—	Home	3	do.
	—	—	—	—	Home	3	do.
	—	—	—	—	Home	5	do.
	—	—	—	—	Home	4	do.
— ve	—	—	2 — negative	—	Home	5	do.
ical tive	—	1 — negative	—	—	School	180	do.
— e	—	—	—	—	Day outing to seaside resort	—	do.
— ve	—	2 — negative	—	—	Home	3	do.
e	—	—	—	—	Home	—	do.
	—	—	—	—	—	—	Left address; whereabouts unknown.
e	—	—	—	—	Home	—	Not known.
cal ive	—	—	—	—	Salvation Army hostel	—	do.

GENERAL MEDICAL SERVICES

Arrangements for medical examinations of Corporation employees for any purpose connected with their employment are made through the Health Department.

Entrants

Administrative, professional and technical staff entering the Corporation service are medically examined in accordance with the regulations of the City Council by independent specialists and, if necessary, X-ray examinations are arranged.

Members of the staff of the Health and Children's departments who are covered by the provisions of the combined Circular 64–50 from the Ministries of Health and Education and the Home Office, relating to persons working with children have an X-ray examination on joining the service and at specified regular intervals afterwards.

Home helps and day nursery staff are medically examined on appointment by a medical officer of the Department.

Medical examinations of persons residing in Manchester who are joining the staffs of other local authorities are arranged at the request of such authorities.

Retirement through incapacity

Under the superannuation provisions of the Manchester Corporation Act, 1920, applicants for retirement on superannuation through incapacity are medically examined under the direction of the Medical Officer of Health and the necessary certificate issued if the person proves to be unfit to continue with his duties. These examinations are conducted by the Senior Medical Officer-Administrative.

Miscellaneous examinations

Medical examinations of sick employees are carried out at the request of Corporation committees. These requests are usually made when a member of the staff has been absent for some time due to sickness but has not made application to retire on medical grounds; the examinations are undertaken by the Senior Medical Officer-Administrative.

Staff welfare

Staff employed in the Town Hall and Extension who are involved in accidents or taken ill whilst at work are treated in the Staff Accident and Welfare Room. The necessary medical and nursing treatment is provided by the Health Department. 83 persons were so treated during 1955.

Details of the medical examinations carried out by the medical staff of the Department, and by independent specialists, are shown in the following table:—

Medical examinations of staff

Department	Entrants to the Corporation service	Retirements on superannuation	Miscellaneous	Total
ord Mayor's	—	—	—	—
own Clerk's	11	—	—	11
aths and Wash-houses	—	1	4	5
hildren's	87	—	1	88
ity Architect's	53	3	—	56
ity Surveyor's	42	3	1	46
ity Treasurer's	58	—	—	58
leansing	7	16	5	28
ousing	18	5	7	30
arkets	1	—	—	1
arks and Cemeteries	8	2	1	11
ealth	335	5	—	340
ivers	3	2	—	5
tationery	3	—	—	3
Waterworks	26	3	2	31
Welfare Services	16	—	5	21
irports	5	—	—	5
robation Service	4	—	—	4
ransport	34	55	—	89
ibraries	38	—	1	39
olice	10	1	1	12
Weights and Measures	4	—	—	4
own Hall Superintendent's	—	1	—	1
ducation	—	7	—	7
ivil Defence	2	—	—	2
rt Galleries	1	—	—	1
ire Brigade	1	—	—	1
Works	—	1	—	1
Totals	767	105	28	900
For other local authorities	17	—	—	17
GRAND TOTAL	784	105	28	917

* NOTE.—The medical examination of entrants into the service of the Education Department is arranged within the School Health Service.

MENTAL HEALTH SERVICE

This part of the report gives particulars of the operation of the Counci schemes during 1955 under the Mental Deficiency Acts, 1913–1938, and t Lunacy and Mental Treatment Acts, 1890–1930 as amended by the Nation Health Service Acts, 1946–52.

Administration

Mental Health Sub-committee

The Service is operated by the Council through the Health Committee a a Mental Health Sub-committee has been established consisting of 16 membe including a co-opted representative of the Manchester District Nursing Ins tution. The Sub-committee meets each month and deals with all matte within the purview of the local health authority relating to mental healt with the exception of staff appointments, salaries, wages and conditions of servic The Sub-committee has no delegated powers and all its proceedings are subje to confirmation by the Health Committee and the City Council.

Staff

The Medical Officer of Health is approved by the Minister of Health f the purpose of making recommendations for voluntary and temporary treatme under the Mental Treatment Act, 1930. He is also authorized by the lo health authority, as are the Deputy Medical Officer of Health and the Seni Medical Officer (Administrative), to give medical certificates accompanyi petitions to judicial authorities for Orders under the Mental Deficiency Act 1913–38.

Three male duly authorized officers, formerly general relieving officers wi the Social Welfare Committee are employed to initiate proceedings for the ca and treatment of persons suffering from mental illness, and a 24-hour duty ro is maintained to deal with emergencies which occur outside normal office hou Five female mental health visitors, all experienced social workers, supervise t domiciliary care and progress of the mentally defective; two are qualified mental or mental deficiency nursing and are also State registered nurses; o is a University graduate with training in social work.

The care and after-care of mental illness is provided by a qualifi psychiatric social worker, a social worker and a trainee psychiatric soc worker, all female.

All the staff are employed full-time.

Two staff changes took place during the year. In February one of the tw psychiatric social workers resigned to take up an appointment in South Afri In spite of every effort to secure a replacement, the shortage of qualifi psychiatric social workers made this impossible. It was therefore necessary appoint a social worker in her place. In June one of the mental health visito resigned, and she was replaced in August by a lady of equivalent qualificatio There has been an addition to the staff by the appointment of a trainee psychiatr social worker ; this appointment will be dealt with in the section relating prevention, care and after-care.

The number of staff employed in the centres is given in the following tab and is in accordance with the recommendations of the Ministry of Heal contained in Circular 91/49.

Occupation centre staff

Occupation centre	Supervisor	Assistant supervisor	Domestic help	Stoker
coats	1	2	1	—
toria Park	1	8	3	1
thenshawe	1	3	1	—
Total	3	13	5	1

	Instructor	Assistant instructor
Adult centre	1	1

-ordination with hospitals

The shortage of hospital accommodation, which is not only a local but also ational problem, has continued throughout the year as a major problem the Service. This shortage is particularly serious on the mental deficiency e of the work and, at the end of the year, there were 119 mental defectives on Manchester Regional Hospital Board's waiting list for admission to perman- residential accommodation—a rise of 12 compared with 1954. These are ssified according to sex, age and type in the following table which also icates the period of time that these patients have been awaiting vacancies.

Type, age and sex distribution of mental defectives awaiting hospital admission

Time on waiting list	MALE								FEMALE								
	Under 16				Over 16				Under 16				Over 16				Total
	(*a*)	(*b*)	(*c*)	(*d*)	(*a*)	(*b*)	(*c*)	(*d*)	(*a*)	(*b*)	(*c*)	(*d*)	(*a*)	(*b*)	(*c*)	(*d*)	
4 years	1	3	1	1	—	2	1	1	3	1	—	—	—	1	2	1	18
ars	1	2	2	—	—	1	1	1	1	—	—	—	2	2	2	1	16
ears	1	2	1	—	1	2	2	1	3	2	—	—	—	2	2	2	21
ars	1	4	2	—	—	1	5	2	3	2	1	—	—	3	4	—	28
1 year	2	5	2	1	—	3	4	3	3	2	2	—	4	4	—	1	36
on waiting list, 31st December, 1955 ..	6	16	8	2	1	9	13	8	13	7	3	—	6	12	10	5	119

(*a*) cot and chair cases.
(*b*) ambulant low grade cases.
(*c*) medium grade cases.
(*d*) high grade cases.

Admissions to mental deficiency hospitals have numbered 97 during 1955. eir age and sex distribution, together with the authority on which they were nitted, is shown in the following table. The number of persons admitted mental hospitals appears under the section of this report dealing with the nacy and Mental Treatment Acts.

Mental defectives admitted to mental deficiency hospitals

Method of admission	Male		Female		Tota
	Under 16	Over 16	Under 16	Over 16	
Upon petition	3	9	2	6	20
Placed by parent	4	—	3	1	8
By Court Order	2	2	—	1	5
By Order of the Secretary of State ..	—	—	—	—	—
Place of safety	4	2	3	3	12
Temporary admission	14	7	5	7	33
Total	27	20	13	18	78

Mental deficiency hospitals continued throughout the year to provi short term care for mental defectives in cases of urgency. During the year cases were so admitted giving valuable relief to parents.

Close co-operation has continued to exist between the Service and all t mental and mental deficiency hospitals in the region, and in 1955 the followi domiciliary reports were supplied to the hospitals upon request:—

Social history, progress, licence and recertification reports

Type of report	Male		Female		Tot
	Under 16	Over 16	Under 16	Over 16	
Social history	19	21	12	17	69
Progress	—	91	1	26	118
Licence	18	127	7	78	230
Recertification	30	128	13	106	277
Total	67	367	33	227	694

A satisfactory degree of co-ordination existed throughout the year betwe the service and the staffs of mental hospitals in the area, particularly in relati to the exchange of information which proved invaluable in meeting the after-c requirements of discharged patients.

Voluntary associations

No duties were delegated to voluntary associations. As in previous ye the Council, with the approval of the Minister, continued their annual cont bution of £25 in support of the general work of the National Association f Mental Health.

A party of 26 pupils from occupation centres again enjoyed a week's holid at the Association's Home at Rhyl, and a member of the occupation cent staff was again seconded to the Association's annual course, based Manchester, for the training of staffs employed in those centres.

In the provision of short term care for mental defectives in cases of urgency, her than in mental deficiency hospitals, use has been made of four homes ; rchard Dene Short-stay Home, Rainhill, near Liverpool; Redcourt Approved ome, Glossop; Broomgrove, Victoria Park, Liverpool, and the Approved me attached to the Manchester and District School for Jewish Handicapped ildren. In the case of Orchard Dene Short-stay Home, one bed was reserved r Manchester children for the peak summer months, June to August. In all, children were admitted to these homes during 1955.

Co-operation with the Mental After-care Association has been good and in 55 the Association was able to provide convalescent accommodation for 10 anchester patients discharged from mental hospitals.

aining of staff

As in previous years, in order to increase the number of qualified staff ployed in occupation centres, one member of the staff was seconded to the tional Association for Mental Health course; of the 16 supervisors and assis- nt supervisors employed, 2 are recognized, on grounds of experience, as ing qualified and 4 hold the Diploma of the National Association for Mental alth.

The recruitment of qualified staff continues to be extremely difficult and nsequently the Authority has had to appoint candidates without training, t the policy has been that of appointing persons with experience in dealing h children.

In addition to seconding one occupation centre assistant supervisor to the nual National Association for Mental Health course, 2 members of the ntres' staff attended the Association's annual refresher course held in London.

Two members of the staff, the administrative assistant and one mental health itor attended a mental health course organized by the Department of Social ministration of Manchester University.

In June, 1955, two members of the Health Committee attended the conference Leeds in connection with the proposed course for mental welfare officers. e attendance of one member of the staff on the proposed course was subse- ntly authorized.

th visitors and social science students

As in previous years, the Service continued to co-operate with Manchester iversity in giving practical and theoretical training in mental health to dents from the Department of Social Administration. Similar facilities were ended to student health visitors preparing for the examination of the Royal iety for the Promotion of Health.

All students were given experience in district visiting, and visits to occupation tres and hospitals were arranged.

Although these students were not pursuing specific studies in mental health, acquaintance with the administration and problems of a domiciliary mental lth service will serve to broaden the basis upon which the foundation of their ure work will be built, and may well provide future recruits for mental health rk.

Mental Deficiency Acts, 1913–38

ertainment

A total of 127 new cases of mental deficiency were ascertained in the City ing the year; of these 106 were subject to be dealt with under the Mental iciency Acts. The ascertainment and disposal of these cases is shown in following tables:—

Ascertainment of mental deficiency—
(a) new cases ascertained

	Education Act, 1944		Other sources		Total
	Section 57 (3)	Section 57 (5)	Subject to be dealt with	Not subject to be dealt with	
Males	22	22	16	16	76
Females	17	19	10	5	51
Total ..	39	41	26	21	127

(b) disposal of mental defectives ascertained

Method of disposal	Male		Female		To
	Under 16	Over 16	Under 16	Over 16	
(*a*) Defectives found subject to be dealt with :—					
Admitted to institution	3	2	1	—	
Placed under guardianship	1	—	—	2	
Taken to places of safety	2	—	1	—	
Placed under statutory supervision	29	23	23	19	
Died or removed from area ..	—	—	—	—	–
Action not taken by end of year..	—	—	—	—	–
(*b*) Defectives found not subject to be dealt with :—					
Placed under voluntary supervision	—	16	1	4	
Later found not to be defective ..	—	—	—	—	–
Died or removed from area	—	—	—	—	–
Action not taken by end of year..	—	—	—	—	–
Total	35	41	26	25	1

Forms of care

2,483 mental defectives were known to the Service on 31st December, 195 Of these,1,047 (42·5 per cent.) were under statutory supervision, 229 (9 per cen were under voluntary supervision, 1,180 (47·5 per cent.) were in institutio 16 under guardianship and 11 in a place of safety.

Guardianship

In accordance with the City Council's policy to increase the use of guardia ship as a form of care for mental defectives, 3 further cases were placed und guardianship during the year, bringing the total number of guardianship cas to 16.

Tribute should be paid to the excellent work being carried out by t Guardianship Society, Brighton, which is at present caring for 13 Manchest guardianship cases. In addition to the regular visits paid to these patients the officers of the Society, six-monthly visits are paid by the Senior Medi Officer (Administrative) or the Administrative Assistant—Mental Health. 3 cases the Society has found it possible to place the patients in suital employment.

emoval from supervision

Removals from voluntary supervision numbered 26 and 73 others were taken ff statutory supervision during 1955. Details of these removals are as follows:—

Removal of defectives from supervision

Reason for removal	Male		Female		Total
	From statutory supervision	From voluntary supervision	From statutory supervision	From voluntary supervision	
able of managing themselves nd their affairs	1	4	2	3	10
tification under Section 57 of he Education Act, 1944, ancelled	5	—	—	—	5
nsferred to voluntary–statu- ory supervision	1	3	—	1	5
nsferred to other authorities	11	2	5	4	22
t sight of	1	2	2	1	6
d	4	—	1	4	9
er causes	26	1	14	1	42
Total	49	12	24	14	99

arriage and children

Of the total number of mental defectives known to the Service, 1 male and females married during 1955. 2 defectives gave birth to children after arriage and there were 2 illegitimate births to mental defectives during the year.

ccupation centres

Three centres located in the Ancoats, Victoria Park and Wythenshawe istricts are in operation and the Minister has given borrowing powers approval r a fourth which will serve the North of the City. In addition, a nucleus dult centre has been established; the operation and value of this centre will e dealt with later in the report.

ttendance

Attendance at the centres is voluntary but every effort is made to encourage arents to send their children regularly for training. The average daily attendance roughout 1955 was 76 per cent. of the number of pupils on the registers.

The total number of pupils attending the occupation centres at the end of 955 was 201; the accommodation at the centres having now reached saturation oint, further admissions are dependent on pupils ceasing to attend. At the nd of the year there were 15 mental defectives on the waiting list for admission the centres.

Pupils at the centres have the same holiday periods as children at primary chools in the City.

Attendance of mental defectives at occupation centres

Occupation centre	Male		Female		Total
	Under 16	Over 16	Under 16	Over 16	
Ancoats	14	3	12	5	34
Victoria Park	40	—	40	15	95
Wythenshawe	18	—	18	3	39
Adult centre	—	33	—	—	33
Number awaiting vacancies	1	10	3	1	15
Total	73	46	73	24	216

Transport

Throughout the year children have been conveyed to and from the occupatio centres in hired transport. Five Corporation buses are used, three by Victor Park and one each by the Ancoats and Wythenshawe centres, and pupils a escorted by members of the centre staff. No charges are recovered for thi service.

Medical examination

A physical examination of each pupil attending the occupation centres w carried out during the year by the Senior Medical Officer (Administrative 24 pupils were referred to their general medical practitioners for the treatme of minor ailments, and arrangements were made for 29 pupils to attend th Manchester Dental Hospital.

Meals

Each pupil attending an occupation centre is provided with a hot mid-da meal supplied by the School Meals Service at a cost to the pupil of sixpenc no charge is made to pupils whose parents are of poor financial means. Fre milk is supplied to all pupils under the age of 18 years.

The staffs assist in serving the meals and at all the centres the standard c meals supplied has been most satisfactory.

Activities

The curriculum of the centres is framed to provide training in clean habit good manners, physical development and, where possible, a knowledge c simple manual occupations.

It is not possible in the smaller centres to arrange a satisfactory grading c pupils because of the limited space available and storage difficulties in rente premises.

At Victoria Park, however, a system of grading in relation to both ment attainment as well as sex and chronological age of the pupils is in operatio

The subjects taught at the centres include habit and sense training, mus and movement, table manners, domestic management, speech training, an sewing and embroidery for the senior girls. Percussion bands form a popul and invaluable part of the training.

A party of 26 pupils enjoyed a week's holiday at Rhyl in June, 1955, and arties and a visit to the circus again formed happy features of the annual hristmas festivities.

Satisfactory reports on the centres were received from the Ministry of Health ollowing visits by an Inspector of the Board of Control.

During the year, three assistant supervisors, two qualified and one unqualid, left to take up appointments as supervisors with other authorities.

anchester Jewish School for Handicapped Children

With the approval of the Minister of Health, the City Council have made a nancial grant to the work of this School. The grant is in respect of 4 mentally efective children, resident in Manchester, who have been admitted to the school rough the Mental Health Service, and is equal to the average annual cost per ild of children attending the City's occupation centres.

The children receive normal occupation centre training, and the scheme has oved most satisfactory.

In June, 1955, the Minister approved the establishment of a residential Home tached to the School; the Manchester Regional Hospital Board entered into contractual agreement with the School for the use of beds and 4 Manchester tients are so accommodated.

dult centre

In July, 1955, the Committee approved the establishment of a nucleus ult centre for male defectives aged 16 and above, and in September, 1955, is centre was opened at 9, Anson Road, Victoria Park, and occupies a building the rear of the Victoria Park Occupation Centre and one room on the cupation centre premises.

The centre consists of two classes, one for woodwork and one for general ndicrafts such as basketry, leather work, rug making and stool making. In e woodworking class many useful articles have been made such as step-ladders, thes maidens, paper racks, stool frames and kitchen cupboards to name but few. In addition, toys are being repaired for the day nurseries.

It is very gratifying to see the keeness and industry of the pupils of this new ntre, and it is apparent that further development is already needed by the ovision of premises sufficiently large to permit the introduction of other cupations. It is estimated that the eventual number of places to be catered for ll be in the region of 100.

nacy and Mental Treatment Acts

Notifications of persons alleged to be of unsound mind amounted to 733 ring the year and, of these, 584 were admitted to mental hospitals.

Lunacy and Mental Treatment Acts, 1890–1930
(*a*) ascertainment

Source of notification	Males	Females	Total
neral medical practitioners	183	280	463
spitals and clinics	73	85	158
ice authorities	9	20	29
her Corporation departments	28	19	47
neral public	15	14	29
her sources	4	3	7
Total..	312	421	733

(*b*) disposal

	Males	Females	Total
Hospital admission—			
(*a*) observation	177	226	403
(*b*) voluntary	34	24	58
(c) temporary	1	2	3
(*d*) certifiable	44	76	120
Referred to other departments or agencies	9	19	28
No further action necessary	47	74	121
Total	312	421	733

(c) subsequent disposal of patients admitted to mental hospitals for observation

Disposal	Males	Females	Total
Voluntary	72	82	154
Certified	61	84	145
Discharged	23	38	61
Died	8	7	15
Pending disposal	13	15	28
Total	177	226	403

(*d*) patients admitted direct into mental hospitals

	Males	Females	Total
Voluntary patients	126	120	246

In addition, 61 patients (32 males and 29 females) were dealt with on beh of other local authorities.

The number of visits made by duly authorized officers was 2,279.

Prevention, care and after-care

During the year, the Department lost the services of one of its t psychiatric social workers and she was replaced by a social worker ; in additi a trainee psychiatric social worker was appointed as a result of consultati between the Department and the Association of Psychiatric Social Worke The trainee, a social science graduate, is employed on a temporary basis for to two years and is required, during that period, to be accepted for one of t psychiatric social worker's courses. In authorizing this appointment, the C Council was mindful of the need for increasing the supply of qualifi psychiatric social workers.

The services of Dr. Northage J. de V. Mather, as Consultant Psychiatrist to Department have been of great value in that psychiatric consultations can arranged at the Town Hall. As a result, the demands of other municipal ial services in relation to the mental health aspect of their work have been .

Large numbers of referrals have continued to be made by hospitals, statutory voluntary services and relatives, and liaison between all the hospitals and ices was satisfactorily maintained.

Throughout the year arrangements were made for recommended patients have periods of convalescence in the convalescent homes of the Mental er-care Association and elsewhere.

The approval of the Minister has been given to the establishment of a day tre and therapeutic club for mental illness, and suitable premises are being ght prior to presenting a detailed scheme to the Health Committee for roval.

A number of students did periods of practical work in the Service under the ervision of the psychiatric social worker. These included one psychiatric ial worker student from the Manchester University, a social science student m the London School of Economics, a social science student and a Cyprus ernment scholar from the University College of Swansea and a trainee bation officer from the Liverpool University.

The burden of bad housing conditions on persons suffering from mental ess, or where such conditions are having a detrimental effect on a mental ective in the household, has been alleviated, in certain cases, by the award of ical priorities for re-housing.

The statistics relating to care and after-care are shown in the following le:—

Care and after-care of mental illness

	Males	Females	Total
ber of visits or interviews	339	859	1,198
oved from care	59	96	155
rred for medical report :—) to general medical practitioner	2	1	3
) to psychiatrist or clinic	27	51	78
views with other agencies, departments or ployers	36	40	76
Total..	463	1,047	1,510

ffing

In December, 1955, the City Council approved increases in the establishment he Service. Authority has been given for the appointment, from 1st April, 6, of two trainee duly authorized officers, one mental health visitor and five t-time guides for pupils of occupation centres.

The part-time guides will be responsible for the escorting of occupati centre pupils on the special buses. These duties are at present carried out the staff of the centres and the employment of guides will enable the staff prepare for the day's work before the arrival of the children.

The two trainee duly authorized officers will be appointed in that capac for one year and, should they complete their training satisfactorily, will then appointed duly authorized officers. It is proposed that the duly authori officers who have hitherto been employed almost exclusively on the men illness side of mental health should eventually assume responsibility for a numb of adult male mental defectives; this arrangement, together with the appoi ment of one extra mental health visitor, responsible for mental deficiency wo will reduce the present case load of the existing mental health visitors.

HEALTH EDUCATION

It is the experience of the Department that the education of the public questions of healthy living is best achieved through personal contact made w people by the field workers of the public health team—the medical office health visitors, midwives, mental health workers and sanitary inspectors, a through visits to the Department. These officers are conducting a campaign health education in the course of their duties whether they are advising problems of child care or of housing conditions, or confirming the action tak by more enlightened persons on matters of hygiene arising in the home, and t was continued effectively throughout 1955.

The work of the officers was supplemented by means of lectures, pub cations and exhibitions, and the Department co-operated with organizatio interested in matters of health education of benefit to the public.

Departmental publications, " Infectious Diseases," " The Family Welf Service " and " The Health Services of the City " were issued in addition to number of pamphlets published by the Central Council for Health Educati A monthly distribution of 2,000 copies of the magazine, " Better Health," w made, mainly through child welfare centres, public libraries and school hea clinics. A pamphlet in the " Concilio et Labore " series on the work of t Department was issued by the Information Bureau of the Town Clerl Department.

Diphtheria immunization was advertized in programmes and handbo issued in connection with the Wythenshawe Civic Week, Lancashire Amat Athletic Association and the Roman Catholic and Church of Engla Whit-week processions. In May, the health visitors and school nur undertook a special campaign to induce parents to have their childr immunized and in conjunction with this 1,020 posters were displayed Corporation offices and establishments. Arrangements were made by t Central Office of Information for the display of 16-sheet posters at 63 sites the City.

There was continued interest in the health services administered by t City Council and numerous enquiries were made by students, either persona or by correspondence. Lectures were given by medical practitioners and offic of the Department to various organizations.

A summary of the educational work in conjunction with the child welfare ntres and the Health Department is given below:—

(*a*) Social and business organizations. Lectures were given by members of the health visiting and sanitary services staff as follows:— 12 to Old People's Clubs; 10 to Women's Co-operative Guilds; 4 each to Mothers' Unions and staffs of licensed houses, and one each to the Young Wives Club, a Youth Advisory Group, the Women's Voluntary service, the Openshaw branch of the Amalgamated Engineering Union, the Manchester Geographical Society, the Rotary Club, the Manchester County Forum, Gorton and District Poultry Club, a women's club and a mixed club.

(*b*) H.M. Prison. Two courses of lectures on mothercraft were given to women with young children.

(*c*) District Nursing Institution. Four lectures on environmental hygiene were given to the Institution by a sanitary inspector.

(*d*) Health visitors. A lecture on the co-ordination of the sanitary inspector's work with that of other sections of the Health Department was given to health visitors by a sanitary inspector.

(*e*) Student nurses. Lectures and practical experience were arranged for student nurses of local hospitals ; 205 students attended two lectures and 389 attended one lecture on the social aspects of disease; 268 students attended a lecture on the work of the public health nurse; 268 spent a half-day on districts with health visitors; 63 observed the work of an infant clinic at a child welfare centre.

(*f*) Nursery assistants. 60 visits of observation were made by nursery assistants to child welfare centres.

(*g*) Medical students. Students from the Department of Child Health, St. Mary's Hospitals, made 96 visits of observation to day nurseries and infant clinics at child welfare centres.

(*h*) Doctors. Five medical practitioners studying for the Diploma in Child Health examination attended a total of 22 sessions at child welfare centres.

(*i*) Princess Christian College students. A visit of observation was made to an infant clinic at a child welfare centre by a group of six students.

(*j*) Students in social administration (Manchester University). The work of the Department was discussed with a group of seven students, six of whom later spent a half-day each week for seven weeks at a child welfare centre; one spent a day each week for seven weeks with the welfare officers for the unmarried mothers. Two social science students observed the work of various sections of the Department for three days.

(*k*) University students (extra mural). Two lectures on air pollution were given by a smoke inspector to student groups.

(*l*) Student teachers. A student teacher from a London training college observed the work at a child welfare centre for two days.

(*m*) Grammar school pupils. Groups of pupils from Manchester High School and North Manchester High School for Girls were given lectures on slum clearance and air pollution. A party from Manchester High School for Girls later visited the Department.

(*n*) Local authorities. Two lectures on air pollution were given by the Chief Sanitary Inspector and the Senior Smoke Inspector to the Nelson and district local authorities.

(*o*) Visitors from overseas. Visits to the Department and departmental establishments were made by a Paramount Chief of the Idoma tribe and his interpreter, a Ford Foundation scholar from Burma studying education in mothercraft, a German health visitor, a social worker preparing to take up duty in Karachi as Information Officer and a matron from a South African hospital.

AMBULANCE AND TRANSPORT SERVICE

mbulance Service

Introduction

The Manchester Ambulance Service has continued to operate in accordance ith the provisions of Section 27 of the National Health Service Act, 1946, as nended by Section 24 of the National Health Service (Amendment) Act, 1949.

At the end of December, 1955, the ambulance fleet consisted of 53 nbulances and 11 sitting case vehicles, three of which were new vehicles tained during 1955, as replacements for pre-war vehicles. The average age of e fleet is six years.

These vehicles are distributed between the main Headquarters of the Service 81, Belle Vue Street, West Gorton, and five sub-depots. Vehicles from adquarters also operate daily from two of the larger hospitals in the City der the direct control of an Ambulance Service Sub-depot Supervisor. The b-depots are sited so as to give the maximum service in the shortest possible ne, particularly with regard to accidents and emergency calls.

As a general rule, all requests for ambulance transport are received in the Control Room situated at the Headquarters Depot. These requests are dealt with either by vehicles from the Headquarters Depot or are telephoned by direct lines to the sub-depots according to the availability of vehicles and also to the area of the City from which the ambulances have to collect the patients. At three of the larger hospitals direct contact between the Hospital Transport Office and the Ambulance Service Sub-depot Supervisor is maintained; at two of these hospitals an Ambulance Sub-depot is situated within the grounds of each of the hospitals and at the third the Ambulance Service Sub-depot Supervisor carries out his duties in the Hospital Transport Office. Close liaison is thus maintained and duplication and overlapping of orders is eliminated.

Operational

The demand for ambulance transport still continued to increase during 1955, particularly in connection with the transport of out-patients. This increased demand resulted in an increase of 2·7 per cent. in the total mileage of the ambulance fleet although there was a 9·7 per cent. increase in the total number of patients carried.

Operational record

	1954	1955
Number of journeys	101,681	98,976
Patients removed	175,552	192,580
Total mileage	875,056	898,306
Mileage outside Manchester (non-Manchester patients)	26,053	22,624

Analysis of removals

	1954	1955
Accidents	8,969	9,639
Infectious	13,948	11,068
General	152,635	171,873
	175,552	192,580

Staff

The number of operational staff authorized was increased by six during th year and, at 31st December, 1955, comprised the following:—

Sub-depot supervisors	6
Ambulance drivers	69
Ambulance attendants	72
	147

Of this number, 125 had qualified or requalified in first aid within the las three years. 15 were attending first aid courses at the end of the year, bein new entrants into the service, and there were seven vacancies, including four fo additional vehicles not yet in service.

The ambulance drivers, together with the drivers of the pool cars an commercial vehicles, were again entered in the National Safe Drivin Competition. The rules of this Competition require that, in order to qualif for an award, the driver must have been free from any accident, however slight to person or property for which he was in any way blameworthy and this rul has been enforced rigidly in order both to maintain the value of the awards an also to maintain the high standard of driving which is expected from member of the Ambulance Service.

77 drivers were entered for the 1955 Competition, of whom 51 ultimately ualified for awards, as follows:—

Bar to 20 years' brooch	2
Bar to 15 years' brooch	3
15 years' brooch	1
Bar to 10 years' medal	5
10 years' medal	1
Bar to 5 years' medal	9
5 years' medal	2
Diploma	28
	51

ospital Car Service

The Hospital Car Service, which is operated by the local branch of the omen's Voluntary Services on behalf of the Manchester Ambulance Service, as continued to augment the Ambulance Service and is mainly concerned with e transport of walking cases to and from hospitals within the City, for out-atient treatment, and in-patients on discharge from hospitals within the City their homes. The operational record of the 17 drivers normally utilized was follows:—

	1954	1955
Journeys	5,962	5,751
Patients	18,147	17,395
Mileage	144,306	140,712

ivil defence

Approximately 150 volunteers in the Ambulance and Casualty Collecting ction of the Manchester Division of the Civil Defence Corps attended for ctional training following a full first-aid course as prescribed by the Home ffice.

During the year 44 new volunteers attended and completed one of the four ll first-aid courses which were arranged, and passed the examination.

Regular weekly meetings of volunteers have been held at the Section's three aining centres which are at :—

Chorlton Ambulance Depot, off Barlow Moor Road, Chorlton-cum-Hardy.
Civil Defence Training School, Livesey Street, Collyhurst.
Rooms over No. 558, Hyde Road, Gorton.

Theoretical and practical work in the following subjects has been dertaken :—

First aid.
Elementary rescue.
Vehicle maintenance.
Casualty faking.
Erection of stretcher fitments.
Map reading.
Sector control.

Driving instruction has been given to volunteers who have completed other ining, and opportunities for driving practice at regular intervals, including its to hospitals in Manchester and adjoining areas, have been afforded to all ivers in the Section.

Several demonstrations showing the work of the Section have been stage during the year at the request of the Warden Section, and in addition, ambulance fully manned and equipped have been placed at the disposal of the Warde Section in connection with exercises which they have arranged.

Approximately 50 volunteers from the Section attended the week-end cam and exercise " Mancunian " which was held on the 16th and 17th July, 1955 at Leek, in conjunction with the Staffordshire County Council and the Lee Civil Defence services.

A course for potential instructors was arranged ; nine volunteers complete the course, of whom six were successful in the examination and were awarde certificates.

Municipal Car Pool

The Municipal Car Pool of five limousine and three saloon cars, ha continued to be administered and operated by the Ambulance and Transpor Service. These cars are used by the various committees and officials of th Corporation, and the mileage operated was 68,039 compared with a mileage o 59,676 in 1954.

Commercial vehicles

During the year, two vans and one lorry were operated on Health Committe functions. The mileage run was 14,018 compared with 23,875 in 1954.

Immunization unit

The mobile immunization unit continued to operate and provided facilitie for the immunization against diphtheria of children whose parents could no bring them to child welfare centres. In addition, special visits were made t those areas where the percentage of immunized pre-school age children was low This vehicle, which is a converted single-deck omnibus, operates from th Monsall Sub-depot and its mileage in 1955 was 8,712.

Disinfection service

A disinfecting station forms part of the Monsall Sub-depot and two steam disinfectors are used for the disinfection of clothing and bedding. In addition a formalin chamber is used for articles which cannot be subjected to the steam process. One of the commercial vehicles is utilized as a bedding van for th collection of infected bedding, clothing, etc., and has been designed so as t ensure that complete disinfection of the interior can be carried out befor being put into service for the return of disinfected articles. The disinfectio of 38,112 articles was carried out, this total consisting of the following :—

Blankets	2,399
Sheets	187
Pillows	752
Bolsters	8
Quilts	6
Mattresses	642
Beds	38
Articles of clothing	12,954
Library books	497
Bales of cotton waste	605
Articles of second-hand clothing for export	18,962
Miscellaneous	1,062
	38,112

The collection and return of these articles necessitated a mileage of 12,172 being undertaken by the bedding van.

inic

A clinic for the treatment of persons suffering from scabies and verminous nditions is situated at the Monsall Sub-depot ; the following figures show number of treatments given during the year :—

Scabies	543
Verminous conditions	463
School-children	448

erating mileage

The total mileage operated by the various sections of the Ambulance and nsport Service during 1955 was as follows:—

Ambulance service	898,306
Municipal Car Pool	68,039
Commercial vehicles	1,846
Bedding van	12,172
Immunization unit	8,712
	989,075

LANGHO COLONY FOR SANE EPILEPTICS

Dr. G. A. Thompson, Medical Superintendent

STAFF:

G. A. Thompson, M.R.C.S.(ENG.), L.R.C.P.(LONDON)	Medical Superintendent.
Miss E. J. Smith, S.R.N., R.M.N., R.M.P.A.	Matron.
S. A. C. Bunn, F.C.C.S., A.H.A.	Secretary-Steward.

On the 31st December, 1955, there were maintained in the Colony 263 le and 278 female residents, of whom 206 were chargeable to the Manchester rporation and 335 to other authorities, as under:—

County Borough Councils	
Barrow-in-Furness	1
Birkenhead	1
Birmingham	7
Blackburn	25
Blackpool	10
Bolton	4
Bootle	2
Bradford	3
Burnley	11
Croydon	2
Dewsbury	2
Edinburgh	1
St. Helens	1
Leeds	8
Liverpool	19
Newcastle-on-Tyne	2
Oldham	9
Preston	8
Rochdale	2
Salford	23
Southampton	1
Southport	2
Stockport	1
Warrington	1
Wigan	2
	148

County Councils	
Cheshire	6
Durham	5
Glamorgan	3
Hertfordshire	1
Lancashire	132
Leicestershire	1
Middlesex	8
Monmouthshire	1
Northamptonshire	1
Salop	2
Staffordshire	1
East Suffolk	4
Surrey	7
Worcestershire	1
Yorkshire, North Riding	2
Yorkshire, West Riding	11
	186

Ministries	
Ministry of Pensions and National Insurance (Manchester)	1

Total: 335

The total number of epileptic seizures during the year was 21,097

	Severe	Slight	Total	Average	Number of resider maintain
Male ..	6,959	6,803	13,762	54	263
Female ..	3,571	3,764	7,335	26	278
Totals ..	10,530	10,567	21,097	—	541

The classification of the incidence of seizures during the year wasas follows

	Males	Females
Status epilepticus	1	—
Increased incidence	54	—
Decreased incidence	51	73
No change	129	132
No seizures during the year	59	71

There were:—

	Males	Females	Totals
Admissions	32	20	52
Re-admissions	33	3	36
Discharges	56	22	78
Deaths	15	4	19

Treatment at hospitals and clinics:—

	Males	Females
Blackburn Royal Infirmary:—		
Ear, Eye, Nose and Throat Department	11	3
Fracture Department	14	26
Gynaecology Department	—	2
Medical Department	5	3
Orthopaedic Department	14	2
Physiotherapy Department	6	3
Radiotherapy Department	—	5
X-Ray Department	7	2
Skin Department	10	3
Surgical Department	11	7
Surgical appliances and garments	2	3
Transfers—for examination and treatment:—		
Accrington Victoria Hospital (Medical)	2	—
Artificial Limb Fitting Centre, Manchester ..	2	—
Blackburn Royal Infirmary	5	2
Chest Clinic, Duke Street, Blackburn	2	2
Chorley Hospital (Outpatients Department) ..	1	—
Manchester Royal Infirmary (Fracture)	1	—
,, ,, ,, (Outpatients) ..	1	—
Preston Royal Infirmary (Orthopaedic)	1	—
,, ,, ,, (Plastic Unit)	1	—
Royal Southern Hospital, Liverpool (Plastic Unit)	1	—
Wythenshawe Hospital (Plastic Unit) Manchester	—	1
Transfers—for operative treatment:—		
Royal Infirmary, Blackburn	4	3
Queens Park Hospital, Blackburn	2	1
Victoria Hospital, Accrington	1	—
Transfers—for observation:—		
Bridgewater Hospital, Patricroft, Eccles	—	1
Whittingham Hospital, near Preston	4	—

The employment of residents on 31st December, 1955, was as follows:—

	Male	Female
Domestic—the homes, etc.	89	119
Domestic—administrative block, etc.	10	14
Domestic—general kitchen	—	12
Laundry	2	20
Occupational therapy department	25	19
Sewing room	—	21
Grounds, coal-yard and wood shed	45	—
Engineers' department	5	—
Shoemakers' department	2	—
Tailors' department	1	—
Assembly hall	5	—
Farms	10	—
Kitchen gardens	7	—
Office and general stores	5	—
Light duties in the homes	11	—
Sports field..	5	—
Elderly, infirm or otherwise unemployable	41	73
Totals	263	278

isits to the Colony

The Colony was officially visited by members of the Welfare Services ommittees of the following County Borough Councils:—

Birmingham, Blackburn, Rochdale, Salford, St. Helens and Warrington. hey all expressed appreciation of the work that is being done here and the care nd attention given to the residents.

nprovements and work completed

Additional items of furniture, bedding, radiograms and televisions have been btained in continuance of the policy of making the Homes more comfortable r the residents.

A new main has been laid to the Colony direct from the Blackburn town ater supply; this new supply is giving every satisfaction and is a great improveent on the old one which was taken from a main before processing.

ntertainments

The usual entertainments were enjoyed by the residents and included weekly nces, pictures and monthly concerts, etc. A successful Sports Day was held 9th July, when we had the pleasure of welcoming the members of the Health ommittee and Corporation officials. The prizes were kindly presented by ouncillor J. Conway (Chairman of the Residential Homes Sub-Committee). ur cricket team had a most enjoyable season in Division 1 of the North-East ncashire League, the weather being very kind. The Colony football team had number of friendly matches against nearby teams and those of neighbouring tablishments and Blackburn Rovers' "A" team played a number of their me matches on our ground. These games gave great pleasure to the residents, pecially when the opposition was provided by such teams as Manchester City United.

The residents again had their annual trips to Blackpool, and at Christmas ere was again a very full programme of entertainments including an outing a Pantomime in Preston.

Farms

The usual high standard of farming has been maintained under the supervision of the Farm Bailiff and our attested herd of Ayrshire cows, pigs and poultry have proved extremely successful and profitable.

General remarks

Throughout the year, the health of the residents has remained good, and there have been no epidemics of any kind.

In October, an " Incentives Scheme " was introduced whereby all residents who do work that benefits the Colony receive sums of money varying from 2s. to 8s. weekly; this is in addition to pocket-money allowances received from the National Assistance Board. Previously, they were rewarded by tobacco, cigarettes or sweets. The new system has been well received, and has given practical encouragement to a number of residents.

The staffing position still gives cause for concern, but is only to be expected in view of intense competition from neighbouring industries and establishments.

There is a steady demand for vacancies at the Colony, and a substantial " waiting-list " for admissions exists.

I would again like to thank the Matron, Secretary-Steward, Head Male Attendant and all other members of the staff for the support that they have given me during the past twelve months, and in conclusion, I would also like to thank the members of the Residential Homes Sub-Committee for their unfailing courtesy.

DR. GARRETT MEMORIAL HOME

The Home, which contains 130 effective beds, affords recuperative sea-side nvalescence for Manchester children between the ages of two and 15 years.

The sources from which children are referred to the Home are the School ealth Service, maternity and child welfare centres, City hospitals and general edical practitioners. The majority of those admitted suffer from general d/or nervous debility, some form of disease of the respiratory system, or aemia.

Usually, twenty-two children are conveyed between Manchester and the me, in Conway, North Wales, by chartered omnibus once each week.

Admissions numbered 973 compared with 933 in 1954. Of the 991 children charged, 844 were recorded as " fit ", 141 as " improved " and 6 as equiring further hospital treatment "; 987 gained weight during their stay, ilst in the case of the remaining 4, no changes in weight were perceived.

The highest number in residence was 132 and the lowest 90 ; the average mber maintained was 117·41, as compared with 115·23 last year. It is imated that another 4 could be added to the latter figure in respect of ildren taken home by their parents prior to due discharge date ; 374 children re " discharged " in such circumstances, as compared with 279 last year.

There were no instances of children leaving the Home without permission compared with one last year.

It was a disappointment to me that we were unable to admit 1,000 children ring the year—we failed by 27— had we maintained full staff throughout year I think this would have been possible.

Illness amongst children, requiring nursing care in the Home, included cases of tonsillitis, sore throats and coryza, 22 cases of rubella, 55 cases of uenza, 13 cases of otitis media, 1 case of measles and 3 cases of Sonné entery. 3 children were transferred to the local isolation hospital and 4 Llandudno General Hospital.

The splendid summer enabled the children to enjoy outdoor recreational lities, under the direction of the three Wardens, to the fullest extent.

At the beginning of autumn the weekly film shows commenced and have n a constant source of enjoyment. The projection television set, radio-gram simple handicrafts provided entertainment during inclement weather.

At the end of January Miss N. Daft, Matron, Miss E. Griffin, Assistant tron, and Miss E. Simpson, Sister left to take other appointments and I wish lace on record my appreciation of Staff Nurses Stephenson and Gandy, and staff who worked and maintained a high number of children so efficiently ing the following two months until Miss M. Jones, Matron, and s M. Selman, Sister, commenced their duties on the 1st April.

Buildings and outdoor wooden chalets and huts have been repaired where ssary.

Christmas festivities were enjoyed by everyone and we were very pleased eceive the Mayor and Mayoress of Conway on Christmas morning when ets were distributed to the children.

To sum up : the year has been a very happy one, having regard to the ges of three senior nursing staff, which always necessitates explanations of edure of general routine matters.

MUNICIPAL HOSTELS

Women's:	Ashton House, (Corporation Street, Ancoats)— Miss S. J. Bayley, Manageress.
Men's:	Walton House (Harrison Street, Ancoats)— Mr. H. Stainton, Manager.

Accommodation is provided at these two hostels, in separate cubicles, f 210 women and 464 men respectively; during 1955 the average nightly occupan was 151 at Ashton House and 446 at Walton House. These figures show slig reductions on those for 1954 mainly owing to a general falling-off during t midsummer months; numbers revived later in the year and the average night occupancy during the final quarter was 157 and 458.

Ashton House is registered as a Common Lodging House for women; was opened in 1910. The accommodation has not been used to its fulle capacity but bookings have been steady apart from the usual seasonal decli during the summer holiday period. Again, there has been only a small demar for cooked meals, except during the Christmas season, but the general provisi shop situated on the ground floor of the Hostel has been well patronised a the catering generally has been maintained at a satisfactory standard.

Improvements and alterations effected, for the benefit and comfort of t residents, have included the covering of all corridors and landings with linoleu and the tiling of the walls in the kitchens. These works have done much brighten the interior of the Hostel and to facilitate cleaning. The commun amenities provided have proved adequate for the needs of the residents.

Walton House was opened in 1899 and is registered as a Common Lodgi House for men; it has been enlarged twice since that date, the final work taki place in 1952. The residential amenities consist of smoke-room, reading-roo dining-room, kitchen, baths, toilets and washbowls and laundry, the latter n only providing service for the residents but for several Corporation departmen

Principal improvements have been the provision of 58 vynide cover fireside chairs to replace wooden forms in the smoke-room and reading-room replacement of a washing machine which became unserviceable and improv ment of the ventilation system in the kitchen by the provision of new canopi and electric extractor fans.

The catering section continued to provide excellent service for the residen and was well patronized both for meals and for general groceries.

Accommodation charges were as follows:—

Ashton House:	Rent of cubicle 3s. a night or 19s. 3d. weekly. Parcels storage 1d. per week.
Walton House:	Rent of cubicle 3s. 3d. a night or 21s. weekly. Parcels storage 1d. per week.

The rent charge includes free use of lockers, baths (with soap and tow provided) and early calling of residents, upon request.

ursing Services Division

DOMICILIARY MIDWIFERY
INCIDENCE OF BLINDNESS
CARE OF MOTHERS AND YOUNG CHILDREN
DENTAL CARE
HEALTH VISITING
REGISTRATION OF NURSING HOMES
DAY NURSERIES
TUBERCULOSIS SERVICE
EPILEPSY AND CEREBRAL PALSY
HOME NURSING
DARBISHIRE HOUSE HEALTH CENTRE
CONVALESCENCE
HOME HELP SERVICE
FAMILY WELFARE SERVICE
VENEREAL DISEASES

NURSING SERVICES DIVISION

Dr. Alice I. Burke, Senior Medical Officer

TAFF

Medical—

Alice I. Burke, M.B., CH.B., D.P.H., Senior Medical Officer
Hilary Grace Blank, M.B., CH.B., M.R.C.S., L.R.C.P., D.C.H. (appointed 18th April, 1955, resigned 22nd October, 1955)
*Anthony Denys Bostock, M.B., CH.B. (appointed 14th November, 1955)
Muriel Jane Brayshay, M.B., CH.B.
Maureen Buckley, M.B., CH.B., B.A.O., L.M.
Annie Margaret Dawson, B.SC., M.B., CH.B., D.C.H., D.O.
Harold Diggles, M.B., CH.B.
Florence Maud Duckworth, M.B., CH.B.
Joyce Kathleen Howarth, M.B., CH.B., D.C.H. (appointed 18th April, 1955)
Rosaline Howat, M.B., CH.B.
Gwendoline Mary Elsie Keevil, M.B., B.S., D.C.H.
William Lees, M.B., CH.B., M.R.C.S., L.R.C.P., D.OBST.R.C.O.G.
Lydia McMurdo, M.R.C.S., L.R.C.P.
Barbara Joyce Nathan, M.A., M.B., CH.B., D.OBST.R.C.O.G. (resigned 31st March, 1955)
*Henry Roy Simpson, M.B., CH.B., D.OBST.R.C.O.G. (appointed 14th November, 1955)
Dorothy Elizabeth Margaret Thomas, M.B., CH.B., D.OBST.R.C.O.G.

Medical Officers

Nursing—

Eileen A. Lamb, S.R.N., S.C.M., M.T. DIPLOMA—Non-medical Supervisor of Midwives.
Evelyn L. Gowing, S.R.N., S.C.M., H.V. CERTIFICATE—Superintendent of Health Visitors.

Lay—

Charles A. Hay, M.B.E.—Chief Administrative Assistant.

* Joint appointment with Education Committee.

DOMICILIARY MIDWIFERY SERVICE

aff

The staff establishment of domiciliary midwives comprises a non-medical pervisor and 2 assistants, 67 district midwives and 3 premature baby nurses.

In addition there are 11 domiciliary midwives employed in St. Mary's ospital Extern Service, and 3 midwives in the service of the Manchester istrict Nursing Institution. These two bodies employ midwives on an agency sis on behalf of the City Council.

pervision of midwives (*Midwives Acts*)

Notices of intention to practise during 1955 were received from 276 idwives.

Sources of notices of intention to practise

Municipal midwives	Employed on an agency basis	Independent midwives	Private maternity nurses	Institutions	Total
70	23	5	3	175	276

This number compares with a total of 292 in 1954.

The non-medical supervisors made a total of 714 visits during 1955 as follows :—

Inspections at midwives' homes	158
Visits to confinements and nursings	203
Visits to ante-natal clinics	69
Special visits to midwives (sickness, etc.)	96
Investigations, stillbirths, pyrexia, etc.	149
Hospitals and nursing homes	39

Training of midwives

The City Council participates jointly with St. Mary's Hospitals in a scheme for training pupil midwives. 28 municipal midwives and 2 midwives of St. Mary's Extern Service are approved by the Central Midwives Board for Part II training.

27 pupils were trained during the year, 26 of whom were successful in qualifying as state certified midwives.

Four midwives attended the post-graduate courses organised by the Royal College of Midwives, 2 at each of the following centres, Birmingham and Oxford. In addition, 10 midwives attended a three weeks course at St. Mary's Hospital, which the Central Midwives Board agreed to recognise under the new compulsory post-graduate regulations for 1955 only.

Lectures

A series of 10 lectures were given during November, the average attendance being 44 midwives at each.

Transport

Motor cars are owned by 31 municipal midwives and they are reimbursed for mileage at the authorised rates. Midwives without cars are able to obtain transport day or night on application to the Health Committee's Ambulance and Transport Depot.

Ante-natal care

Midwives hold ante-natal clinics at 24 of the municipal welfare centres and they made 2,596 attendances for this purpose.

In April, 2 ante-natal sessions weekly were commenced at Darbishire House Health Centre. Particulars of the Darbishire House Health Centre are given elsewhere in this Report.

Post-natal care

Facilities are available for post-natal examinations at 7 clinics. Th attendances during the year remained the same as for 1954, namely 63.

Deliveries

The total number of births in the City during 1955 was 13,246 of which 4,375 were home confinements attended as shown below :—

Attendances at domiciliary births

Municipal midwives		Queen's district midwives		St. Mary's district midwives	Independent midwives		Private maternity nurses	Total
As midwife	As maternity nurse	As midwife	As maternity nurse		As midwife	As maternity nurse		
2,954	661	103	6	533	8	9	1	4,37

This gives a percentage of those confined at home of 33·0

The percentages of previous years are as follows :—

1954	34·3
1953	38·4

There were 4,191 applications for the services of municipal midwives and of these 621 were cancelled for various reasons.

This figure includes patients transferred to hospital during labour.

Other duties which continue to make demands on the midwifery service nclude 3,498 visits to patients discharged from hospital before the 10th day, 403 visits to homes for investigation purposes, 10,073 ante-natal visits to patients homes and the nursing of 78 cases of abortion.

The average number of cases per annum attended by domiciliary midwives employed direct or under agency arrangements with the City Council is as follows :—

Municipal midwives	64·9
St. Mary's district midwives	57·5
Queen's district midwives	37·0

Medical aid

There were 1,532 requests for medical aid in accordance with the rules of the Central Midwives Board. Of these 78 were by midwives in maternity homes having no resident medical officer. Where medical aid was requested at domiciliary confinements, in 1,003 cases a doctor had been booked while in 529 cases a midwife only was engaged.

Artificial feeding

Recourse to artificial feeding was notified in 645 instances, 184 from domiciliary midwives and 461 from institutions.

Analgesia

All municipal midwives have been provided with a gas/air apparatus. Lectures and demonstrations on the administration of Trichloroethylene have been given. The Health Committee have authorised the purchase of the necessary apparatus for the administration of Trichloroethylene, and a limited number of appliances was delivered at the end of the year.

During the year 3,505 patients received gas/air analgesia.

dditional equipment

Each midwife has been supplied with a sphygmomanometer and bi-aural stethoscope on the recommendation of the Ministry of Health.

Puerperal pyrexia

447 cases of puerperal pyrexia were notified under the Pyrexia Regulations of 1951, the rate per 1,000 total births being 37·18. This is an increase on the previous year, the rate then being 36·79. There were 4 deaths among cases so notified.

These include :—

1 tubercular meningitis.
1 infarction of brain due to thrombo-phlebitis of venous sinuses of brain.
1 septic abortion with perforation of the uterus.
1 Caesarian section, paralytic ileus—septicaemia.

Of the 447 cases notified 143 were due to sepsis, 110 to other causes, while 194 were unclassified.

The incidence of pyrexia is shown on the following table :—

Incidence of pyrexia

	Municipal midwives	Midwives acting as maternity nurses	St. Mary's district midwives	Queen's midwives	Institutions	General practitioners -no nursing attendance	Total
A. (1) Infection of genital tract	6	6	13	—	108	—	133 (1 d
(2) Abortions	—	—	—	—	4	6	10 (1 d
B. Extra-genital causes ..	4	3	12	—	91	—	110 (2 die
C. Unclassified	1	3	2	—	188	—	194
Totals.. ..	11	12	27	—	391	6	44

386 abortions occurred which were transferred to hospital, but were no notifiable under the Puerperal Pyrexia Regulations, 1951. This is an increas of 128 over the previous year.

Maternal deaths

There were 9 deaths during 1955 which were directly attributable to child birth and 1 which was associated with childbirth.

The maternal mortality rate was 0·75 as compared with 0·49 in 1954.

The 9 deaths which occurred were due to the following causes :—

Septic abortion—septicaemia (1) self induced .. .. (2) open verdict	2
Massive pulmonary collapse—obstetric shock	1
Infarction of brain due to thrombo-phlebitis of venous sinuses of brain following childbirth with puerperal pyrexia..	1
Post-operative paralytic ileus—septicaemia caesarian section, severe pre-eclampsia 38 weeks	1
Uraemia, renal failure, spontaneous abortion	1
Obstetric shock—natural causes	1
Post-partum haemorrhage, ruptured uterus	1
Pulmonary embolus, laparatomy, pelvic adhesions to uterus ; 10-12 weeks pregnancy	1
Total	9

In addition there were 3 other deaths in Manchester hospitals, the patien residing outside the City boundary, viz. in Sale, Denton and Droylsden.

Stillbirths

There were 366 notified stillbirths, which represents a percentage in relatio to total births of 2·93.

The respective percentages for 1953 and 1954 were 2·70 and 3·63. (stillbirths occurred in domiciliary practice, and 300 in institutions.

Maternity nurses

During the year the establishment of 6 special maternity nurses was abolished n the recommendation of the Ministry of Health. Their duties, which included he care of pyrexial and other unsatisfactory conditions of mother and infant nd assisting in the care of premature babies, were taken over by the domiciliary midwives and home nursing staff. During the period they were employed in 1955, they had paid 1,582 visits to patients.

mphigus neonatorum and other skin conditions

Three cases were notified by medical practitioners during the year and were ursed by the Queen's nurses of the Manchester District Nursing Institution.

Unnotified cases of skin eruption

The maternity nurses, during the period they were employed in 1955, paid 5 visits to 21 cases of skin infection. These cases are referred to the Department y hospitals, health visitors and midwives. 738 visits to 71 cases of skin nfection were paid during 1954. Since the establishment of maternity nurses was abolished, cases brought to the notice of the Department have been referred o the health visitors.

Premature babies

Two specially trained nurses were employed until September for the care f premature infants in their own homes. A further nurse was appointed in eptember, bringing the establishment of premature baby nurses up to 3.

They were responsible for the care of 418 infants during 1955, paying total of 3,158 visits.

Neo-natal mortality of premature infants according to birth weights

Weight	Survived	Died	Total	Mortality rate per cent
Under 3 lb.	5	—	5	—
3—4 lb.	39	—	39	—
4—5 lb.	195	3	198	1·51
5 lb. plus	173	3	176	1·70
Totals	412	6	418	

Cause of death of the 6 infants mentioned in the table :—

Birth weight	*Diagnosis*
4 lbs. 11 ozs.	(*a*) Cerebral haemorrhage. (*b*) Probably septicaemia. (*c*) Birth injury.
4 lbs. 12 ozs.	..Atelectasis.
4 lbs.	..Suprarenal haemorrhage.
5 lbs.	..Collapse of lung.
5 lbs.	Asphyxia—overlain by parent. (Inquest—misadventure).
5 lbs.	..Internal hydrocephalus with bleeding into the lateral ventricle.

Source of reference of premature babies :—

Hospitals	348
Nursing homes	18
Domiciliary midwives	52
Total	418

When the nurses ceased to attend, 90 infants were entirely breastfed, 5 breast and complimentary, while 277 were artificially fed.

Cots

Specially prepared and heated cots are available for use in the home. 2 applications were received during the year.

Opthalmia neonatorum and other eye conditions

There is an establishment of 3 opthalmic trained nurses for the care of a eye cases referred to the department.

The sources of reference of such cases are shown in the accompanying tabl

Cases of ophthalmia neonatorum and conjunctivitis in newly-born Infants and eye defects in older children

	Legitimate	Illegitimate	Total
1. Ophthalmia neonatorum—			
(*a*) Notified by medical practitioners	35	2	37
(*b*) Notified by Royal Eye Hospital	2	—	2
2. Conjunctivitis in newly-born— Reported by midwives :			
(*a*) Own cases	356	7	363
(*b*) Discharged from hospital before the 14th day	15	2	17
3. Conjunctivitis and other eye defects in children over 14 days—			
(*a*) Reported by medical officers of child welfare centres	78	3	81
(*b*) Reported by health visitors	232	20	252
Totals	718	34	752

Place of treatment for cases of ophthalmia neonatorum and conjunctivitis in the newly-born

Number of cases attending the Royal Eye Hospital :-		
In-patients	7	
Out-patients	32	
		39
Number of cases attended by own doctor		713
Total		752
Corneal infections—		
(*a*) Under 14 days..		Nil
(*b*) Over 14 days		1
Total		1
Swabs—		
Positive		6
Negative		32
Total		38

Premature live and still-births

The following tables give particulars as to the survival of premature infants born alive at home and in nursing homes and hospitals in the City during 1955.

Particulars are also given regarding still-births.

1. *Number of premature live births notified (as adjusted by transferred notifications).*

(*a*) In hospital	586
(*b*) At home	159
(*c*) In private nursing homes	42
Total	787

2. *Number of premature still-births notified (as adjusted by transferred notifications).*

(*a*) In hospital	142
(*b*) At home	27
(*c*) In private nursing homes	2
Total	171

	Premature live births															**Premature still-births**		
Weight at birth	Born in hospital			Born at home and nursed entirely at home			Born at home and transferred to hospital on or before 28th day			Born in nursing home and nursed entirely there			Born in nursing home and transferred to hospital on or before 28th day			Born in hospital	Born at home	Born in nursing home
(1)	Total (2)	Died within 24 hrs. of birth (3)	Survived 28 days (4)	Total (5)	Died within 24 hrs. of birth (6)	Survived 28 days (7)	Total (8)	Died within 24 hrs. of birth (9)	Survived 28 days (10)	Total (11)	Died within 24 hrs. of birth (12)	Survived 28 days (13)	Total (14)	Died within 24 hrs. of birth (15)	Survived 28 days (16)	(17)	(18)	(19)
(a) 3lb. 4oz. or less (1,500 gms. or less)	75	29	26	7	2	5	2	1	1	—	—	—	—	—	—	63	7	—
(b) Over 3lb. 4oz. up to and including 4lb. 6oz. (1,500–2,000 gms.)	132	15	100	20	1	19	14	3	6	9	—	9	—	—	—	37	11	1
(c) Over 4lb. 6oz. up to and including 4lb. 15oz. (2,000–2,250 gms.)	126	4	121	32	—	32	3	—	2	5	—	5	—	—	—	19	5	—
(d) Over 4lb. 15oz. up to and including 5lb. 8oz. (2,250–2,500 gms.)	253	3	246	77	1	76	4	—	2	28	—	28	—	—	—	23	4	1
Totals	586	51	493	136	4	132	23	4	11	42	—	42	—	—	—	142	27	2

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Summary of cases of ophthalmia neonatorum and conjunctivitis in the newly-born

Number discharged as recovered	736
Number discharged with damaged sight	—
Number died from any cause	—
Number removed from district	—
Number still under treatment at end of year	16
Total	752

Number of visits by ophthalmic nurses

(*a*) primary	752
(*b*) subsequent	5,358
Total	6,110

Analysis of eye conditions of children over 14 days referred by health visitors and child welfare centres

	Brought forward from 1955	New cases	Carried forward to 1956
onjunctivitis (simple)	10	206	9
onjunctivitis (purulent)	—	17	—
chrymal obstruction	4	72	7
acryocystitis	—	6	—
ordeoleum	—	13	—
orneal nebula	2	1	2
oloboma	6	1	5
ataract (congenital)	16	4	18
lioma	2	2	4
efective vision	17	5	20
icrophthalmos	1	—	1
ystagmus	7	4	9
nophthalmos	3	—	1
uphthalmos	1	—	1
etrolental fibroplasia	21	—	15
ptic atrophy	2	—	2
osis	1	—	—
rneal ulcer	2	—	1
horoid retinitis	1	—	1
roptosis	1	—	1
lepharitis	3	2	—
Totals	100	333	96

24 children attained the age of 5 years and were referred to the Senior edical Officer—School Health Service.

INCIDENCE OF BLINDNESS

(National Assistance Acts)

The information contained in Part A of the following statement, which is in the form requested by the Minister of Health, has been supplied by the Chief Welfare Officer of the City Council's Welfare Services Department:—

A.—Follow-up of registered blind and partially sighted persons, 1955

	Cause of disability			
(i) Number of cases registered during the year in respect of which paragraph 7 (c) of Forms B.D.8 recommends:—	Cataract	Glaucoma	Retrolental fibroplasia	Others
(*a*) No treatment	50	16	—	61
(*b*) Treatment (medical, surgical or optical)	38	13	—	46
(ii) Number of cases at (i) (b) above which on follow-up action have received treatment..	28	9	—	33

B.—Ophthalmia neonatorum

(i) Total number of cases notified during the year ..	39
(ii) Number of cases in which:—	
(*a*) Vision lost	Nil
(*b*) Vision impaired	Nil
(*c*) Treatment continuing at end of year	Nil

Cases of retrolental fibroplasia among premature infants.. ..	Nil
Cases of congenital cataract	4
Number blinded by glaucoma who had not received treatment..	Nil

CARE OF MOTHERS AND YOUNG CHILDREN

Welfare centres

In April, 1955, two additional child welfare sessions weekly were commenced at the Darbishire House Health Centre; particulars of Darbishire House are given elsewhere in this report. The number of centres at the end of the year was 27 municipal and 1 voluntary.

The voluntary centre is at the Holy Name School, the medical officer, health visitor and clerk being supplied by the Department. Other staff at this centre is provided by the Sisters of Charity of St. Vincent de Paul.

The position regarding clinic facilities in the Wythenshawe area is stil unsatisfactory but progress has been made in the negotiations for the erection of buildings which will combine maternity and child welfare and school clinics the Ministry of Health having approved in principle of the construction of two such centres in Northern Moor and Baguley. The City Council has approved of the necessary applications for borrowing powers in respect of the two premises. Negotiations are proceeding with regard to the erection of the proposed combined clinic at Woodhouse Park.

Clinics

Weekly clinics are provided as follows:—

Infants	70
Toddlers	27
Ante-natal	39

Medical officers attend all sessions except 7 infant welfare clinics which are taken by health visitors only and 3 ante-natal clinics where midwives are in attendance. At 26 ante-natal clinics both doctors and midwives attend. Post natal examinations are undertaken at ante-natal clinics.

Treatment for venereal diseases in mothers and young children was discontinued in May at the two centres formerly used for the purpose. Particulars of attendances and treatment from January to May are given in the "Venereal disease" section of this report.

Physiotherapy

Physiotherapy is provided at 13 centres. The position regarding the recruitment of qualified physiotherapists able to undertake the work is still unsatisfactory with the result that the service is not so extensive as is considered desirable. Sessions include remedial exercises for children of 2 to 5 years who have postural defects, minor deformities and either general or local poor muscular tone.

Ante-natal and post-natal exercises are provided to improve the condition of mothers before and after confinement.

Treatment by artificial sunlight is afforded at 3 welfare centres for expectant mothers suffering from various discomforts of pregnancy and others having post-natal debility and rheumatism. Children receive treatment for adenitis, boils, asthma, rickets, anaemia, malnutrition and spastic paralysis.

Domestic science classes

Cookery classes have been continued in the welfare centres during the year. Demonstrations and practical instruction in food preparation and food values were given at 8 centres. Sewing classes were provided at 11 centres.

Attendances, etc.

Attendances at sessions held during 1955 with comparable figures for 1954 are shown below :—

Infants and toddlers' sessions :—				
Number of children on centre registers at—	31st December, 1955		31st December, 1954	
Under 1 year	6,371		5,759	
1 to 5 years	11,714		10,184	
Total	18,085		15,943	
Attendances made by children—				
Under 1 year	98,297		100,251	
1 to 5 years	42,224		45,981	
Total attendances ..	140,521		146,232	
Ante-natal sessions :—				
Number of new attenders	5,606		5,942	
Total number of attenders	7,604		8,089	
Number of attendances	32,263		35,087	
Post-natal sessions :—				
Number of attenders	231		402	
Number of attendances	332		409	
Physiotherapy sessions :—				
Ante-natal exercises— Number of attendances	1,355		2,184	
Post-natal exercises— Number of attendances	119		132	
Artificial sunlight treatment :—				
Number of attenders—				
Children	421	424	630	635
Adults	3		5	

Minor ailments

142 children under five years of age were referred by the medical officers at welfare centres to school clinics for the treatment of minor ailments. Children who fail to attend or cease attending before treatment is completed are " followed up " by health visitors who stress the desirability of treatment.

The type of ailment and number of children referred for treatment is shown below.

Number of children referred for treatment of minor ailments

Squint	109
Other eye affections	7
Otorrhoea	1
Other ear affections	—
Impetigo	9
Other skin affections	2
Miscellaneous	14

Welfare foods

National welfare foods and proprietary brands of welfare foods and articles are available at all the maternity and child welfare centres. National welfare foods are distributed also at 8 premises other than centres.

Proprietary brands of welfare foods are supplied free of charge in necessitous cases on the recommendation of the centre medical officer. The cost in 1955 was £170 7s. 8d.

Voluntary workers

30 voluntary workers made 955 attendances at welfare centres during the year. Their useful assistance is much appreciated.

" Homecraft " teaching exhibition

Demonstration material available in the Department to supplement talks given by health visitors at welfare centres and for other lecture purposes has been referred to in the past as " mothercraft " exhibits, but the scope of the materials comprising the exhibition has been so expanded as to merit the title of " Homecraft " exhibition. The contents of the exhibition may be divided into seven sections as follows :—ante-natal ; child health ; play therapy ; handicraft (classes for mothers) ; clothing ; nutrition and prevention of accidents.

The handicraft section of the exhibition comprises examples of work done by mothers attending handicraft classes at welfare centres and at the Health Committee's welfare hostel, Knowle House, including slipper making, gloves, embroidery, leatherwork, weaving, woodwork, toys, etc. Mothers attending these classes provide their own materials.

In addition to demonstrations of the material at welfare centres, they have been on view also at Exhibitions organized by various bodies in the city.

Mothers' evening clubs

The evening clubs at Cheetham and Northenden maternity and child welfare centres, which are used for the purpose with the consent of the Health Committee, continued during the year.

Mothers who normally attend the centres meet in the evenings, once a fortnight, in a happy social atmosphere. The activities of the clubs are educational and social including talks, discussions, social evenings, film show, observation visits, " bring and buy " sales, picnics and Christmas parties. Both clubs have their own libraries and publish a news bulletin.

The committees and honorary officers are elected by the mothers.

The number of enrolled members is 59 at Cheetham and 36 at Northenden.

Contact is made between members of the two clubs by an interchange visits.

Children attending child welfare centres

Centre	On register, January 1st, 1955			New attendances during 1955			On register, January 1st 1956		
	0—1 year	1—2 years	2—5 years	0—1 year	1—2 years	2—5 years	0—1 year	1—2 years	2—5 years
bbey Hey	235	190	297	308	33	117	284	191	319
ncoats	95	46	55	144	17	42	96	57	47
rdwick	235	146	232	362	80	194	222	176	264
lackley	130	114	186	148	23	50	138	125	182
urnage (Duchess of York)	187	123	79	229	6	67	172	161	186
heetham	194	115	224	306	38	142	240	134	244
borlton-on-Medlock	172	135	172	281	55	153	198	139	237
horlton-cum-Hardy	313	197	374	400	43	112	326	224	375
layton	145	121	101	225	36	99	179	118	207
ollyhurst	320	166	242	423	63	151	286	190	219
rumpsall	148	122	159	166	25	47	145	133	140
idsbury	188	169	302	272	40	100	273	198	371
orton	306	161	2 8	405	33	120	307	183	197
arpurhey	231	174	228	333	39	81	279	233	302
igher Blackley	129	123	77	184	20	31	135	132	145
oly Name	85	59	59	135	31	29	85	49	64
ulme	126	86	143	211	45	120	175	98	165
evenshulme	308	240	434	413	40	186	306	233	483
ew Moston	173	146	143	270	26	98	209	130	210
ewall Green	290	191	460	421	86	345	331	238	555
ewton Heath	232	146	288	274	29	99	221	158	302
orthenden	244	185	426	322	48	225	233	179	443
penshaw	303	191	228	389	51	127	322	240	276
usholme	337	197	338	511	72	151	357	233	362
harston	207	135	243	331	60	136	254	147	247
art Road, Fallowfield	144	112	154	218	18	68	191	113	173
ithington	232	211	331	395	52	157	277	246	425
arbishire House	—	—	—	154	38	39	154	41	36
otal **1955**	5,759	4,001	6,183	8,230	1,147	3,286	6,395	4,499	7,176
otal 1954	6,307	4,535	7,061	7,812	890	2,858	5,759	4,001	6,183

urseries and Child Minders Regulation Act, 1948

At the end of the year there were six persons registered as child minders care for a total of 50 children. Two persons were registered and one iscontinued minding children during the year.

Two factory nurseries are registered under the Act and they provide ccommodation for 60 children.

One voluntary nursery is also registered under the Act with accommodation r 40 children. The City Council subsidizes the maintenance of this nursery nder the powers contained in Section 22, National Health Service Act, 1946.

All persons and premises registered under the Act are visited regularly y a medical officer and a health visitor on the staff of the Department.

are of illegitimate children and their mothers

The departmental arrangements for the care of illegitimate children and their nothers is under the supervision of a health visitor specially appointed for hese duties, who is assisted as necessary by other members of the health isiting staff. The duties include investigation of cases, advice and assistance, and rrangements in connection with the Health Committee's hostel at Knowle louse, Handforth.

Cases are referred by officers of the Health, Children's and Welfare Services epartments, general medical practitioners, hospital almoners and social orkers of voluntary organizations.

The following particulars indicate the work during the year and compariso with the previous year :—

		1955	195
(1)	Office interviews	1,250	1,36
	Home visits	698	58
	Visits to hospitals	97	10
	Visits to Knowle House	99	9
	Visits to other hostels	9	
	Interviews—social workers and health visitors ..	706	87
	Attendances at Magistrates' Courts	84	9
	Total visits and interviews	2,943	3,11
(2)	Health visitors' records dealt with	2,826	3,03

(3) Number and classification of persons dealt with during the ante-nat period with results of confinement :—

	Live births	Births pending	Still-births	Mis-carriages	Not pregnant	Tot
Single	154	57	1	—	1	21
Married	37	10	—	—	1	4
Widow	12	—	1	—	—	1
Divorcee	4	1	—	—	—	
Parents married before birth of baby ..	—	14	—	—	—	1
Mother removed	—	11	—	—	—	1
Totals	207	93	2	—	2	30

(4) Number of mothers dealt with who have had illegitimate children 702.

(5) Illegitimate children :—

Total number dealt with by Welfare Officer—897, comprising :—

228 children of mothers seen in post-natal period only.
207 children of mothers seen in ante-natal period during 1955.
40 children of mothers seen in ante-natal period during 1954.
422 children whose cases were reinvestigated or carried forwar from previous years.

Particulars of illegitimate children remaining with their mothers

Mothers	In lodgings or absorbed into family	With mother and putative father	With mother in a hostel	Parents subse-quently married	Removed from Manchester	No trace	Deaths	Total
Single	381	64	8	22	21	9	11	516
Married	119	46	—	2	4	2	2	175
Widow	20	—	1	—	—	—	1	22
Divorcee	20	3	—	—	—	—	—	23
Totals	540	113	9	24	25	11	14	736

Particulars of illegitimate children apart from their mothers

Mothers	With adopters	With relatives	With foster mothers	Boarded out by Children's Committee	In residential nurseries (Children's Committee)	In residential nurseries (private)	Total
ngle	38	19	9	3	12	22	103
arried.. ..	12	10	4	4	9	8	47
idow	3	1	—	—	1	—	5
ivorcee ..	—	3	2	—	1	—	6
Totals ..	53	33	15	7	23	30	161

The action taken by the Welfare Officer as regards cases referred to the epartment was as follows :—

Accompanied mothers and babies and expectant mothers to hostels, hospitals and residential nurseries	119
Admissions arranged to—	
Knowle House Hostel	121
Voluntary hostels	10
Ante-natal care arranged	20
Cases referred to—	
Children's Department	105
Welfare Services Department	13
Mental Health Service	5
Poor Man's Lawyer Association	5
National Assistance Board	55
Probation officers	5
Catholic Moral Welfare Council	38
Catholic Adoption Society	20
Diocesan Council for Moral Welfare	15
Manchester and Salford Methodist Mission..	5
National Society for the Prevention of Cruelty to Children	5
Manchester Employment Exchange	5
Manchester and District Adoption Society	15
Other organizations	4
Assistance given—	
To book a hospital bed	58
To obtain a vacancy in a day nursery	26
To obtain legal advice	20
To find lodgings	5
To secure employment	6
Provision of perambulators and cots from departmental sources	7
Provision of clothing from departmental sources ..	40
Provision of clothing from voluntary sources	15
Provision of clothing from National Assistance Board..	16

Advice given *re*—

Affiliation orders	128
Day nurseries	150
Hostel accommodation	147
Institutional accommodation	20
Private residential nursery accommodation	15
National Health Insurance benefits	139
National Assistance	72
Adoption	179
General matters	105

Regular visits were paid to 63 families requiring close supervision.

Affiliation order cases

57 applications for affiliation orders were heard by the Manchester Magistrates' Court and were dealt with as shown :—

Assistance given by	Orders granted
Welfare Officer	33
Welfare Officer and Poor Man's Lawyer Association	4
Welfare Officer and National Assistance Board	15
Welfare Officer and private solicitors	5
Total	57

Mother and Baby Home, "Knowle House," Handforth

The primary reasons for admission to this home, which is administered b the Health Committee, are :—

(*a*) Mother and baby homeless, either because prior to her confinemen the mother had been living in an institution, hostel or lodgings o had been engaged in residential employment.

(*b*) Relatives unwilling to allow the mother to return home with he illegitimate baby.

(*c*) Overcrowded or unsatisfactory home conditions.

The Welfare Officer arranges for the admission of mothers and babies t the home and is responsible for making suitable arrangements for them on thei discharge.

The following table shows the admissions and discharges during the year :—

	Carried forward from 1954	Admissions	Discharges	Number in th Home at the end of the yea
Babies	12	88	91	9
Mothers	11	74	76	9
Expectant mothers	2	27	27	2
Recuperating mothers	1	16	17	—

The following particulars show the arrangements made for the care of the 91 babies discharged :—

Babies remaining with mother—	
In home of relatives	8
In residential domestic employment	2
In lodgings	7
In institutional accommodation	4
In long-term hostels	4
Babies apart from mother—	
In homes of adopters	29
In private residential nurseries	16
In homes of foster mothers	1
In the care of the Children's Committee	3
In hospital	2
Babies with recuperating mother	14

Recuperative Centre

By arrangement with the Community Council of Lancashire, mothers and children are admitted to the Brentwood Recuperative Centre, Marple, Cheshire, on recommendation by the health visitors, the cost of maintenance being borne by the Health Committee. Since 5th July, 1948, provision for these arrangements has been made in the City Council's scheme for prevention of illness, care and after-care under Section 28 of the National Health Service Act, 1946.

Admission to the Centre during 1955 comprised seven mothers whose ages were from 24 to 42 years, 4 children under 1 year, and 11 children from 1 to 6 years.

One family, after a special request, remained at Brentwood for six weeks, and the other six varied from 11 days to four weeks.

The four primary reasons for recommending the mothers for admission to Brentwood are :—

1. Lack of training and experience in housewifery and child management.
2. Ill-health and lowered vitality, due to too-rapid child-bearing, depressing surroundings and environment and, possibly, in the case of some mothers, malnutrition.
3. Unsatisfactory home conditions, including lack of domestic facilities.
4. Difficulties between parents, causing the mother to lose interest in her home and children.

Marked improvement in both mental and physical condition of the family is evident after a stay at Brentwood. In most cases the mothers look more alert and happy, find pleasure in household tasks, and the children benefit greatly from the training given in the Centre. By frequent visits from the health visitor it is hoped to maintain and still further improve the standard of living of these families.

DENTAL CARE OF MOTHERS AND YOUNG CHILDREN

(Principal School Dental Officer—G. L. Lindley, L.D.S.)

Mr. Byrom, the Principal School Dental Officer, who, in 1953, w
responsible for the inauguration of the comprehensive dental service f
patients attending the Health Committee's child welfare centres, resigne
in June, 1955.

The work was undertaken by school dental officers working in five scho
clinics, and by the part-time dental officer engaged directly by the Committe
General anaesthetics were given by a medical practitioner, and trained nurs
were available. An oral hygienist worked a quarter of her time for the Con
mittee. Mechanical dentistry was done at the laboratory in Shakespeare Stre
school clinic.

During the year, statistics showed a consolidating of the previous year
progress. There has been an increase in the number of cases treated, an
in the work done. The greatest increase, however, has been in the extractio
of teeth and provision of dentures for mothers.

It is pleasing to report that during the year all cases referred by medic
officers were inspected promptly, urgent treatment attended to immediatel
and there was only a short waiting period before the commencement
treatment of a less urgent nature.

A pilot scheme of evening dental sessions at Northenden school clin
has proved so successful that it is going to be expanded to the remaining fo
school clinics.

The five school clinics used are among those the Education Committ
have agreed to re-equip with modern dental equipment, including two wi
X-ray units.

Despite the improvement, the situation cannot yet be regarded as entire
satisfactory. Surgery accommodation is still required in the Wythenshav
area and in the north of the City : some time must elapse before the ne
health centres planned for these areas can be incorporated into the schem
The delay in adapting and equipping the suite of rooms at Rosamund Stre
child welfare centre and the fact that there are no alternative premises as y
available in the Cheetham Hill district, to replace the room at present in u
in the Cheetham Hill centre, prevented comprehensive dental treatment bei
carried out in these areas.

Recruitment of dentists is still a major problem.

The tables below give details of the year's activities, and for compariso
1954 figures are shown :—

(a) Numbers provided with dental care

		Number referred from child welfare centres	Number examined	Number needing treatment	Number treated	Numb mad dentall
Expectant and nursing mothers	1955	644	967	955	1,402	28
	1954	—	925	920	911	26
Pre-school children	1955	1,152	1,812	1,766	2,031	86
	1954	—	1,832	1,770	1,884	88

(b) Forms of dental treatment provided

		Extractions	Anaesthetics		Fillings	Crowns	Inlays	Scaling and gum treatment	Silver nitrate	Dressings	Radiographs	Other	Dentures	
			Local	General									Complete	Partial
ectant d nursing others	1955	3,284	715	127	214	—	1	173	—	25	3	637	184	82
	1954	1,781	148	117	167	—	—	162	—	74	—	—	119	70
-school	1955	1,260	247	478	760	—	—	21	3,283	95	—	78	3	1
ildren	1954	1,153	157	377	635	—	—	6	3,375	25	—	—·	1	1

(c) Work undertaken by the oral hygienist

	Number treated	Number of visits	Number completed
xpectant and nursing mothers	74	145	42
e-school children	22	26	20

(d) Mechanical dentistry

Dentures completed	271
Repairs	2
Inlays	2
Bites	254
Special trays	21
Models cast..	304

HEALTH VISITING

The duties of health visitors include advice and assistance to all members f the family. In particular they are concerned in dealing with problem milies, the nutrition and development of children under school age, and the ealth and welfare of their mothers.

The teaching of parentcraft and homecraft are important parts of the ork of the health visitors and they have increasing functions regarding the care f ageing persons, and for the prevention of accidents in the home for all age roups.

In December, 1955, the health visitors had under observation 62,910 children nder 5 years of age, compared with 58,938 for the previous year.

otification of births

The total number of notifications adjusted by transfer was 12,853 comprising 2,487 live births and 366 still-births.

Total registered births numbered 12,022 and of these 852 were illegitimate.

It has been possible in 10,698 births (10,383 live births and 315 still-births) epresenting 88·99 per cent. of the total registered births in the City, to consider e place in the family of each birth, and this is shown in the following tables.

Full-time and premature births have been separated, the standard birth eight of 5½ lbs. or under having been adopted in 1938.

Births investigated during 1955 to show place in family

Place in family	Live births				Live births		Still-births				Still-births		Live and still-births
	Legitimate		Illegitimate		1955	1954	Legitimate		Illegitimate		1955	1954	1955
	Full time	Pre-mature	Full time	Pre-mature	Per cent.	Per cent.	Full time	Pre-mature	Full time	Pre-mature	Per cent.	Per cent.	Per. cent.
1st	2,859	226	245	31	32.37	33.42	39	49	7	3	31.11	36.92	32.33
2nd	2,555	167	96	16	27.29	27.93	20	38	3	2	20.00	14.25	27.08
3rd	1,601	134	85	6	17.59	16.87	31	26	—	—	18.10	18.32	17.60
4th	931	78	59	4	10.32	9.89	21	21	—	—	13.33	10.47	10.41
5th	501	42	38	5	5.64	5.33	4	9	3	1	5.40	8.43	5.64
6th	258	24	24	5	3.00	2.88	10	9	—	—	6.03	3.19	3.08
7th	143	16	14	3	1.69	1.50	4	4	—	—	2.54	3.78	1.72
8th	70	7	6	1	0.81	.91	1	—	—	—	0.32	1.45	0.79
9th	48	5	6	1	0.58	.51	—	—	—	—	—	1.16	0.56
10th	26	3	6	—	0.34	.25	—	3	—	—	0.95	1.74	0.36
11th	16	2	1	—	0.18	.22	1	1	—	—	0.63	0.29	0.20
12th	6	—	—	—	0.06	.10	1	1	—	—	0.63	—	0.07
13th	5	—	—	—	0.05	.06	—	—	—	—	—	—	0.05
14th	4	—	1	—	0.05	.06	—	1	—	—	0.32	—	0.06
15th	1	—	1	—	0.02	.04	—	—	—	—	—	—	0.02
16th	1	—	—	—	0.01	.01	—	1	—	—	0.32	—	0.02
17th	—	—	—	—	—	—	—	1	—	—	0.32	—	0.01
18th	—	—	—	—	—	.01	—	—	—	—	—	—	—
19th	—	—	—	—	—	—	—	—	—	—	—	—	—
20th	—	—	—	—	—	—	—	—	—	—	—	—	—
21st	—	—	—	—	—	—	—	—	—	—	—	—	—
22nd	—	—	—	—	—	.01	—	—	—	—	—	—	—
Totals	9,025	704	582	72	100.00	100.00	132	164	13	6	100.00	100.00	100.00

10,383

315

It is interesting to compare the size of the average family and the age of e mother of each new investigated birth in 1955 as compared with 1935 when c analysis was first made. Tables for these two years are as follows:—

(1) Age of mothers at birth of children during 1955 showing place in family of each birth

Age oups ears	Place in family																	Total births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
–	390	64	11	1	—	—	—	—	—	—	—	—	—	—	—	—	—	466
–	1,549	783	317	100	21	4	2	—	—	—	—	—	—	—	—	—	—	2,776
–	978	1,092	660	344	170	66	24	9	5	4	1	—	—	—	—	—	—	3,353
–	395	656	560	379	219	115	67	31	14	7	4	1	—	—	—	—	—	2,448
–	117	232	253	212	150	99	61	27	26	20	10	4	5	1	—	—	—	1,217
–	30	65	78	77	39	39	28	17	14	7	5	3	—	4	2	1	1	410
–	—	5	4	1	4	7	2	1	1	—	1	—	—	1	—	1	—	28
	3,459	2,897	1,883	1,114	603	330	184	85	60	38	21	8	5	6	2	2	1	10,698

(2) Age of mothers at birth of children during 1935 showing place in family of each birth

Age roups ears	Place in family																		Total births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	
–	294	25	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	320
–	1,617	718	184	39	9	1	1	—	—	—	—	—	—	—	—	—	—	—	2,569
–	1,419	1,054	540	253	97	44	19	2	2	—	—	—	—	—	—	—	—	—	3,430
–	489	627	486	337	207	140	74	50	17	7	5	1	—	—	—	—	—	—	2,440
–	118	288	235	194	159	132	111	88	65	30	16	6	4	1	2	—	—	—	1,449
–	18	40	50	68	69	53	53	40	31	32	18	6	7	5	1	1	1	1	494
–	—	2	—	5	9	6	4	1	6	7	5	5	4	3	1	—	—	—	58
	3,955	2,754	1,496	896	550	376	262	181	121	76	44	18	15	9	4	1	1	1	10,760

The 1955 births are further analysed to show the difference between legitimate nd illegitimate births and live and still-births.

Age of mothers at birth of live children during 1955

(A) *Place in family of each investigated birth (legitimate)*

Age groups Years	Place in family																Total births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
–	304	54	10	1	—	—	—	—	—	—	—	—	—	—	—	—	369
–	1,394	727	293	92	18	4	2	—	—	—	—	—	—	—	—	—	2,530
–	901	1,026	606	308	153	56	20	7	5	4	1	—	—	—	—	—	3,087
–	356	633	518	348	190	99	59	30	11	6	4	1	—	—	—	—	2,255
–	101	217	237	193	141	85	50	22	23	14	8	4	5	1	—	—	1,101
–	29	60	67	66	38	34	26	17	13	5	4	1	—	3	1	—	364
–	—	5	4	1	3	4	2	1	1	—	1	—	—	—	—	1	23
	3,085	2,722	1,735	1,009	543	282	159	77	53	29	18	6	5	4	1	1	9,729

(B) *Place in family of each investigated birth (illegitimate)*

Age groups Years	Place in family													Total births
	1	2	3	4	5	6	7	8	9	10	11	14	15	
15— ..	69	9	1	—	—	—	—	—	—	—	—	—	—	79
20— ..	115	33	19	5	1	—	—	—	—	—	—	—	—	173
25— ..	47	45	33	24	10	5	2	2	—	—	—	—	—	168
30— ..	30	12	20	17	24	10	8	1	3	1	—	—	—	126
35— ..	14	10	11	10	7	9	7	4	3	5	1	—	—	81
40— ..	1	3	7	7	1	5	—	—	1	—	—	—	1	26
45— ..	—	—	—	—	—	—	—	—	—	—	—	1	—	1
	276	112	91	63	43	29	17	7	7	6	1	1	1	654

Age of mothers at birth of still-born children during 1955

(A) *Place in family of each investigated still-birth (legitimate)*

Age groups Years	Place in family															Total births
	1	2	3	4	5	6	7	8	10	11	12	14	15	16	17	
15—	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14
20—	36	23	5	3	1	—	—	—	—	—	—	—	—	—	—	68
25—	29	20	21	12	5	5	2	—	—	—	—	—	—	—	—	94
30—	7	9	22	14	4	6	—	—	—	—	—	—	—	—	—	62
35—	2	4	5	9	2	5	4	1	1	1	—	—	—	—	—	34
40—	—	2	4	4	—	—	2	—	2	1	2	1	—	1	1	20
45—	—	—	—	—	1	3	—	—	—	—	—	—	—	—	—	4
	88	58	57	42	13	19	8	1	3	2	2	1	—	1	1	296

(B) *Place in family of each investigated still-birth (illegitimate)*

Age Groups Years	Place in family			Total Births
	1	2	5	
15—	3	1	—	4
20—	4	—	1	5
25—	1	1	2	4
30—	2	2	1	5
35—	—	1	—	1
	10	5	4	19

ll-births

The number of still-births allocated to the health visitors for investigation is 315.

und children

The health visitors found 1,786 other children belonging to families which d moved into Manchester during the year. The year of their birth was as llows:—

766	born	1955
375	,,	1954
268	,,	1953
222	,,	1952
155	,,	1951

aths

383 deaths occurred amongst children under 5 years of age.

The classification according to age is:—

Children	under 1 year	332
,,	1—2 years	13
,,	2—3 years	21
,,	3—4 years	9
,,	4—5 years	8
		383

The distribution according to age of children who died under 1 year was follows:—

ed under 1 day	Died 1 to 7 days	Died 1 week to 4 weeks	Died 1 month to 3 months	Died 3 months to 6 months	Died 6 months to 9 months	Died 9 months to 12 months	Total
92	86	37	47	43	16	11	332

The following table gives mortality rates for the past 10 years amongst ildren 1—5 years. This is based upon the number of live births for the year.

Infant and child mortality rate per 1,000 live births

and case mortality rates for measles and whooping cough

Year	Infant mortality rate	Mortality rate 1—2 years	Mortality rate 2—5 years	Mortality rate 1—5 years	Total cases of measles		Total known cases of whooping cough	
					Cases	Mortality per cent	Cases	Mortality per cent
1946 ..	63·71	3·7	3·9	7·7	3,800	·08	2,265	1·41
1947 ..	59·76	4·1	3·4	7·5	9,008	·23	2,308	·78
1948 ..	42·12	3·2	3·9	7·1	10,650	·16	2,612	·73
1949 ..	38·24	2·7	4·5	7·2	6,485	·11	2,749	1·05
1950 ..	37·87	2·7	3·4	6·1	9,798	·08	4,187	·41
1951 ..	35·29	3·1	2·0	5·1	8,953	·01	2,255	·13
1952 ..	34·28	3·2	2·8	6·0	10,035	·06	2,636	·30
1953 ..	30·53	1·8	2·9	4·7	6,798	·03	2,112	·19
1954 ..	29·47	1·9	2·8	4·7	9,844	·03	1,642	·24
1955 ..	28·37	1·1	3·2	4·4	6,514	·03	1,166	·18

The following table gives mortality rates for quinquennial periods 1911–1955, based upon the number of live births for the year.

Infant and child mortality rate per 1,000 live births

Quinquennial periods 1911–1955

Quinquennial period	Infant mortality	Child mortality, 1—2 years	Child mortality, 2—5 years
1911—1915	133·13	45·0	35·5
1916—1920	104·51	34·9	34·3
1921—1925	95·85	34·2	23·9
1926—1930	87·88	26·2	20·9
1931—1935	77·34	18·3	17·6
1936—1940	70·81	11·3	11·3
1941—1945	63·85	6·3	8·1
1946—1950	48·34	3·3	3·8
1951—1955	31·53	2·2	2·7

Expectant mothers

Health visitors also visited at the end of six months all mothers who had given birth to a still-born child or to a child who had died before reaching the age of one month, in order to ensure adequate ante-natal care should she subsequently become pregnant. 344 still-births and 237 neo-natal deaths occurred in the City during 1954, and 1,105 special visits were made by the health visitors during 1954–55 to those mothers. In this way 39 expectant mothers who might require special care were brought to the notice of the Department.

Co-operation with School Health Service

A report on every child reaching school age and known, on the health visitor's final visit, to be suffering from medical defect or to have an unsatisfactory family history, is referred to the School Health Service ; 610 such summaries were sent during the year, classified as follows :—

Unsatisfactory condition of child	391
Unsatisfactory condition of family	6
History of tuberculosis in child	29
History of tuberculosis in family	175
History of rheumatism in child	4
History of rheumatism in family	5
Total	610

Defective children

(1) Total number of defective children from 0—5 years on the register on 31st December, 1955 1,012

(2) Number of those who were born during 1955 184

(3) The number in (2) who recovered 2
The number in (2) who died 60
The number in (2) who removed out of Manchester 6
Total number still on register on 31st December, 1955 116
184

(4) Number of children who had during the year reached the age of 2 years and were referred to the School Health Service in accordance with the Education Act, 1944, Section 34 306

(5) The number of children under five years of age notified during 1955 as suffering from poliomyelitis.. 6

(6) Number in (5) suffering from paralysis and still requiring treatment 6

Prevention of break-up of families (Circular 27/54)

The Children's Officer is the co-ordinating officer for the committee set up to implement the recommendations of the Circular, and conferences are held at intervals according to the number of families referred for consideration The health visitor concerned with each family under review attends the meeting and takes an active part in the discussions. The confidential discussions with all the social workers concerned are very helpful and result in reducing the number of visitors to the home, by those attending the conference arriving a a decision, as to which workers are most usefully retained in connection with each family, and which should withdraw.

Welfare of women and children on canal boats.

Manchester canal carrying companies do not allow women and children on their boats, but women and children are still found on some of the " narrow boats."

Arrangements are made for an official of the Docks to inform the Health Department when these boats are in the Docks and in addition the health visitor makes an investigation each time she is in the area.

During the year, many visits were paid but only on three occasions were there boats in with families on board.

Family 1. Accommodation—two boats for one family; condition fairly clean. Father and mother; children—boy 13 years, boy 1 years, girl 6½ years and a girl 4 years 10 months; all appeared well.

Family 2. Accommodation—one boat; condition clean. Father and mother and four sons between 20 years and 10 years; al appeared well.

Family 3. Accommodation—one boat ; father and mother and one child, aged 9 years; all appeared well.

These three families have been seen in previous years by the health visitor

Several other boats with families tied up at the Docks for short periods, but the health visitor was unable to contact them owing to their short stay, which on some occasions was only for a few hours.

Care of aged and infirm persons

Special provision is made in the National Assistance Act, 1948, for securing the necessary care and attention for persons who :—

(*a*) are suffering from grave chronic disease or, being aged, infirm or physically incapacitated, are living in insanitary conditions ; and

(*b*) are unable to devote to themselves and are not receiving from other persons proper care and attention.

6,333 individual visits were paid by health visitors to 1,731 persons whose circumstances were reported to be unsatisfactory and were brought to the notice of the Department, including 885 brought forward from last year.

In dealing with these cases, the Department continued to maintain close liaison with the Welfare Services Department, the Manchester District Nursing Institution and hospital almoners.

Details follow with regard to the action taken to deal with the cases reported, and the comparable figures for 1954 :—

	1954	1955
luntary admissions to hospitals—		
Bridgewater	2	—
Crumpsall	116	77
Withington	207	212
Manchester Royal Infirmary	8	16
Ancoats	7	7
The Royal Eye	1	1
Wythenshawe	5	9
Monsall	13	9
Stockport Infirmary	1	—
Jewish	3	1
Hope	1	2
Park	1	—
Ministry of Pensions	1	—
Christie	1	—
St. Thomas's, Stockport	1	—
Ladywell	1	—
Broughton House	1	—
Davyhulme	—	1
Shaw Heath, Stockport	—	1
Northern	—	1
Salford Royal	—	2
Birch Hill, Rochdale	—	1
Chorley & District	—	1
Fairfield, Bury	—	1
St. Joseph's	1	1
dmitted to—		
Little Sisters of the Poor	5	5
Jewish Home for the Aged	1	2
Private nursing homes	7	—
Lansdowne Nursing Home	1	3
Nazareth House, Prestwich	1	—
Bel-Air Nursing Home	—	1
ransferred to—		
Mental Health Service	7	11
Welfare Services Department	79	100
Tuberculosis Service	1	2
Sanitary Services Division	3	3
ied before admission to hospital	143	—
ecovered (nursed at home)	7	5
emoved—no trace	8	10
emoved to relatives' home	22	16
emoved outside Manchester area	4	8
ied at home	—	165
illed in street accident	—	1
sphyxiated due to drowning	—	1
ompulsory removals under Section 47 of the National Assistance Act, 1948	32	29
o further action necessary	130	141
arried forward at 31st December, 1955	756	885
	1,578	1,731
Total number of visits paid during period 1st January, 1954, to 31st December, 1954	6,449	—
Total number of visits paid during period 1st January, 1955, to 31st December, 1955	—	6,333

Particulars of persons dealt with under Section 47 of the National Assistance Act, 1948, and (Amendment) Act, 1951, during the year 1955 and those carried forward from 1952, 1953 and 1954

17 persons were still under supervision on 1st January, 1955.

Brought forward from 1952	1
,, ,, ,, 1953	1
,, ,, ,, 1954	15
New cases dealt with during 1955	29
Total	4

			Brought forward
1952 cases brought forward to 1st January, 1955		1	
Settled in accommodation during 1955 and renewal of Court Order not necessary —	1		
1953 cases brought forward to 1st January, 1955..		1	
Court Order still in force	1		1
1954 cases brought forward to 1st January, 1955..		15	
Settled in accommodation during 1955 and renewal of Court Order not necessary —	7		
Died during 1955	5		
Court Order still in force	3		3
1955 new cases		29	
Settled in accommodation during 1955 and renewal of Court Order not necessary ..	8		
Transferred to mental hospital	1		
Recovered—discharged home	4		
Died during 1955	9		
Court Order still in force	7		7
Number carried forward to 1st January, 1956 ..	—	—	11

Summary of cases still in accommodation under Court Order from 1953 and 1954, and those dealt with for the first time during 1955 :—

Settled in accommodation during 1955 and extension of Court Order not required	16	46
Died	14	
Transferred to mental hospital	1	
Discharged home	4	
Court Order still in force	11	
Number carried forward to 1st January, 1956		11

Section 47—National Assistance Act, 1948, and (Amendment) Act, 1951—cases dealt with during 1955

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
M.	70	Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 18th January, 1955	Extreme senility and undernourished. Fell in room on the night of 12th January and landlady had to force the door. Landlady unwilling to give attention. Patient refused admission to hospital	Died 21st January, 1955, in Withington Hospital
M.	81	Aged and infirm person. Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 1st February, 1955	Extremely dirty and undernourished. In bed on two occasions when visited by Health visitor but says he gets up. His sister and a neighbour refused to look after him. Resented any interference and refused to leave home	Settled in Newholme 12th April, 1955
M.	77	Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 16th February, 1955	Living on his own. Mentally confused and found wandering in the streets at midnight. Undernourished. Refused to live with son	Settled in Newholme 3rd May, 1955
F.	82	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 21st January, 1955	Living in two rooms. Patient very ill and took her own discharge from Withington Hospital against medical advice on 17th January, 1955. No one to look after her at home	7th May, 1955—recovered medically and discharged to former lodgings 10th May, 1955
F.	69	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 21st February, 1955	Extremely difficult person. Artificial limb. Clothing inadequate. No food in the house. All water pipes frozen. Gas fitments defective. Unable to rely on occupant not to light a fire under these risky conditions	21st April, 1955—patient now in Prestwich Hospital
F.	76	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 23rd February, 1955	Very frail and unsteady on her feet. Clothes hanging on a rail over an open fire and a shawl hanging loosely over her shoulders giving rise to a great risk of fire. Refused to use a fireguard. Refused to live with anyone or have anyone to live with her	Died in Newholme, 8th March, 1955

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	71	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 3rd May, 1955	Living alone in one room which was very dirty and neglected. Memory failing; never has a wash and neglects her food. Undernourished. Condition deteriorated very rapidly towards the time of her removal	Died in Newholme 25th June, 1955
F.	82	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation, Newholme	Court Order taken out 10th March, 1955	Suffering from Chronic Bronchitis. Living alone and no relatives. Not getting food. Dirty in person	Settled in Newholme 23rd March, 1955
M.	72	Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 4th March, 1955	Lived alone. Ill, suffering from congestive heart failure. No bedding, old coats used as covers. Not getting any nourishment	17th May, 1955—recovered medically and discharged to Walton House Municipal Hostel
F.	80	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Delaunay's Hospital, Crumpsall	Court Order taken out 5th April, 1955	Living alone. Totally blind and bedfast. Doubly incontinent	15th July, 1955—settled in Delaunay's Hospital, Crumpsall
F.	70	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 20th April, 1955	Patient mentally unbalanced. Clothing in a filthy state. Not receiving adequate nourishment. Lithuanian. No relatives in England	Settled in Newholme 14th July, 1955
M.	77	Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 20th April, 1955	Dirty and unkempt in appearance. Refused to wash himself or change his clothes. Dirty in habits, abusive to other members of the family. Left gas taps turned on without lighting them	Died in Newholme 4th July, 1955
F.	89	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 3rd May, 1955	Living alone in one room. Very confused at times and forgetful. Turned gas on without lighting the gas taps and forgot to turn them off	Settled in Newholme 12th October, 1955
M.	74	Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 30th June, 1955	Blind in one eye. Very breathless at times. No arrangements for personal care and cleaning and no facilities for cooking	Died in Withington Hospital 10th August, 1955

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	85	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 30th June, 1955	Lived alone. Dirty in person. Very senile. Diet inadequate. Conditions deteriorated rapidly	Settled in Newholme 12th September, 1955
F.	92	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 28th July, 1955	Bedfast. Very feeble. Lodgers leaving and patient would be alone and dependent on neighbours for food and care. Unfit to be alone without night care	Died in Withington Hospital 14th August, 1955
F.	63	Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Crumpsall Hospital	Court Order taken out 4th August, 1955	Very emaciated. Colour poor. Malignant disease of neck. Refused admission to hospital. Living in a municipal hostel which was quite unsuitable for an ill person requiring admission to hospital	Died in Crumpsall Hospital 14th August, 1955
F.	50	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Crumpsall Hospital	Court Order taken out 15th August, 1955	Attended hospital out-patient department and was offered admission but this was refused. Patient ill and under-nourished	Recovered and returned home 1st November, 1955
F.	74	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Part III accommodation. 31st December, 1955—transferred to Withington Hospital	Court Order taken out 25th August, 1955	Living alone in very dirty room. Failing to take the necessary nourishment and collapsing from malnutrition at intervals	Court Order to be renewed at appropriate date if still required
F.	81	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 22nd September, 1955	Lived alone after son became ill and had to be admitted to hospital. Son died in hospital 16th October, 1955	Court Order to be renewed at appropriate date if still required
F.	86	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 19th October, 1955	Confused mentally and refused all offers of help. Physical condition gradually deteriorated	Court Order to be renewed at appropriate date if still required
F.	80	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 19th October, 1955	Undernourished. Accumulation of old clothes and papers all over the house and patient used candles and paraffin lamp for lighting purposes with a grave risk of fire	Court Order to be renewed at appropriate date if still required

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	73	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 3rd October, 1955	Undernourished. Bedfast. Incontinent. Refused to go to hospital	Died in Withington Hospital 13th October, 1955
F.	76	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 2nd November, 1955	Physical condition deteriorating due to lack of food and personal attention. Mentally confused. Health visitor called 27th October, 1955 and unable to gain admission. Called a policeman who forced entrance. No food in the house. Taken sleeping tablets ordered by doctor indiscriminately. Offered bed in Withington Hospital but this was refused	Court Order to be renewed at appropriate date if still required
F.	79	Suffering from grave chronic disease. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed. 30th November, 1955—transferred to Part III accommodation, Newholme	Court Order taken out 4th November, 1955	Alone in house from 7 a.m. to 6 p.m. Sat near an open fire with no fireguard. Also left gas taps turned on without lighting them. Refused to allow district nurse to give injections ordered by the doctor. Refused to go to hospital when ambulance arrived	Discharged home to care of relatives 12th December, 1955
F.	91	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 4th November, 1955	Very senile and mentally confused	Court Order to be renewed at appropriate date if still required
M.	85	Aged and infirm person. Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention	3 months	Part III accommodation, Newholme	Court Order taken out 4th November, 1955	Undernourished. No coal, no fire and no evidence of food other than that taken in by neighbours over a considerable period. Physical condition deteriorated gradually. Refused to consider leaving home	Court Order to be renewed at appropriate date if still required

Sex	Age Years	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	—	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 5th December, 1955	General condition deteriorated very rapidly of recent weeks. Not getting sufficient nourishment. Fire un-guarded. Oil stove for heating purposes. Candles for lighting purposes. Refused offer of Part III accommodation. Collapsed at home 6th December, 1955, and admitted to hospital by ambulance	Died in Withington Hospital 14th December, 1955
F.	75	Suffering from grave chronic disease. Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention	3 weeks	Chronic sick bed, Withington Hospital	Court Order taken out 9th December, 1955	Suffering from paralysis of left arm and severe bronchitis. Refused to go to hospital when ambulance arrived. Husband suffering from effects of a stroke and unable to care for his wife	Settled in Withington Hospital 31st December, 1955

Verminous conditions and scabies

Persons treated for verminous conditions at Monsall Clinic

Year	Males adult	Females adult	School children	Children under 5	Total persons
1951	507	116	276	22	921
1952	460	112	260	25	857
1953	382	106	181	26	695
1954	426	128	404	12	970
1955	323	113	457	19	912

The Department has a scheme for supplying special steel combs at cost price to mothers and 12 steel combs were so distributed during 1955.

Scabies

The main source of notification of scabies is the School Health Service, but many cases are brought to the notice of health visitors, either as contacts of those notified by the School Health Service or as new cases.

The source and number of notifications received during 1955 and the preceding years were as follows:—

Sources of notification of scabies

	1951	1952	1953	1954	1955
School Health Service	162	156	149	268	162
Hospitals	8	21	30	26	28
General practitioners	107	100	118	145	96
Centre medical officers	4	9	1	8	4
Health visitors	3	18	25	13	20
Children's Department	1	—	—	3	3
Applied voluntarily	50	93	42	75	69
Discovered at Monsall Clinic	16	33	17	28	23
Salvation Army	1	—	—	1	4
Welfare Services Department	1	—	—	—	—
Sanitary Services Division..	2	—	—	—	—
Ministry of Health	—	1	2	—	—
Business houses	1	1	—	—	—
Day nurseries	—	—	—	4	—
N.S.P.C.C.	—	3	—	—	—
Total	356	435	384	571	409

The number of persons treated at Monsall Clinic is shown in the following le :—

Treatment for scabies

Year	Males adult	Females adult	School children	Children under 5	Total persons
1	61	88	66	63	278
2	143	166	117	144	570
3	161	164	131	95	551
4	149	167	195	141	652
5	121	163	161	97	542

Scabies is treated by two applications of an emulsion of benzyl benzoate th an interval of from one to four days between the first and second atments.

The health visitor paid 229 visits to homes in which scabies occurred in 55.

The Clinic received 178 visitors during the year for purposes of receiving truction and information. The visitors included district nurses, student rses, student nursery nurses and nursing cadets.

tional Society for the Prevention of Cruelty to Children

The Department is again indebted to this Society for assistance in dealing h certain difficult cases. During the year help has been obtained by many mbers of the staff from decentralised Child Welfare Centres by personal ntact, as well as from the Central Office.

aining of student health visitors

An eight and a half months full-time course, approved by the Ministry of alth, is arranged by the Manchester College of Technology, in co-operation h the Health Department.

Twenty-six students were entered for the examination of the Royal Society Health at the end of May, 1955. Of these, twenty-one students were cessful at the first attempt and two of the remaining students have since sed the examination.

An exhibition of the students' work was incorporated with the Annual fresher Course for Public Health Nurses and Health Visitors. The exhibition luded group theses on a variety of subjects and many garments and toys made the students at a minimum cost, were on show.

Forty-eight students enrolled for the course which began in September, 1955, nty-three of them being sponsored by the City Council, and the others by ghbouring Local Health Authorities.

The students gain practical experience in many departments of the local hority such as the School Health, Children's and Welfare Services partments. Many interesting observation visits are arranged, and the students given an insight into the work of a rural health visitor, and of neighbouring nty boroughs.

Visits by health visitors, 1955

Type or cause of visit	Number
Primary visits	12,546
Subsequent visits	36,425
Children 1—2 years	25,449
Children 2—3 years	23,725
Children 3—4 years	20,909
Children 4—5 years	24,807
Children 5—14 years	8,971
Special visits (not otherwise accounted for)	707
Visits "out"	10,163
Persons over 14 years	9,470
Visits by centre superintendents—	
Ante-natal	192
Post-natal	3
Infants	11
V.D. primary	12
V.D. subsequent	2
Total	173,419
Classified visits included in the above total—	
Children—removals	4,209
Children—not seen	8,657
Ante-natal care—	
Still-births, primary	92
Still-births, subsequent, Ex.	52
Still-births, subsequent, N.P.	182
Neo-natal deaths, Ex.	33
Neo-natal deaths, N.P.	110
Expectant mothers, primary visits	939
Expectant mothers, subsequent visits	133
Overcrowding and sanitary defects—	
Overcrowding	—
Defects reported	17
Special visits	2
Scabies—	
Primary visits	160
Subsequent visits	69
Verminous conditions—	
Primary visits	430
Subsequent visits	215
Measles—	
Primary visits	7,047
Subsequent visits	4,653
German measles, primary visits	6,993
German measles, subsequent visits	289
Whooping cough—	
Primary visits	1,066
Subsequent visits	977
Pneumonia—	
Primary visits	293
Subsequent visits	43
Miscellaneous—	
Investigations *re* infantile diarrhoea	8
Aged and infirm cases	6,33
Wrong addresses—	
Infants	164
Infectious diseases	140
Investigation of V.D. primary	13
Investigation of V.D. subsequent	2
Total	43,34
Visits by student health visitors, included in total visits	1,890
Number of child welfare centre sessions attended by health visitors	9,329

NURSING HOMES REGISTRATION

(Public Health Act, 1936, Sections 187–194)

No new nursing home was registered during the year ; one was discontinued.

There was a total of 13 registered nursing homes at the end of the year of ich four were registered for maternity patients, two for maternity, medical d surgical patients, one for medical cases only, two for medical and surgical ses and four for medical or chronic patients.

Exemptions under Section 192 of the Public Health Act, 1936, were granted four voluntary hospitals.

Regular visits to all registered nursing homes were made by a medical icer during the year.

DAY NURSERIES

There was no change during the year in the number of day nurseries ministered by the Health Committee. The accommodation remained at 360 places for children at 27 day nurseries.

The average daily attendance was 1,200 and at the end of December, 1955, ere were 1,534 children's names on the register. During the year, 1,335 ildren were admitted to the nurseries and 1,347 were discharged. There re 1,736 children on the waiting list for admission. 468 children were admitted r short term accommodation for the period of their mothers' stay in hospital.

In most cases the admissions were made by arrangement with hospital moners.

There was no change in the charge for accommodation, i.e. 3 shillings a day ere both parents are gainfully employed and 2 shillings and threepence a y where only one parent is gainfully employed, except in certain circumstances here the City Council have approved of a limited number of free places.

Each child has a medical examination before admission to a day nursery d the medical officers of the Department made 6,011 routine medical aminations during the year. Diphtheria and whooping cough immunization as available for all children accommodated. Smallpox vaccinations were rried out when requested by parents.

Cases of measles and chickenpox occurred in each nursery during the year, t the incidence was not of a serious nature. Special preventive measures ntinue to be taken in day nurseries with regard to Sonne dysentery.

There was a considerable reduction in the number of burglaries compared ith previous years. Malicious damage occurred at a number of nurseries, t the theft of articles was not extensive.

Despite precautions taken, a few children suffered accidents in the nurseries. ll received immediate medical attention.

Nine nurseries are approved by the Ministry of Health for the training of udents for the Certificate of the National Nursery Examination Board, and der reciprocal arrangements with the Education Committee, students are forded full training in the care of children 0–5 years. All the Health Committee students were successful in the 1955 final examination. Ten members the staff attended a Refresher Course and a Warden's Course held in Manester during the year.

Arrangements have continued for medical students, social science and public administration students to attend at day nurseries for purposes of observation.

During the year a number of improvements were effected to sanitary accommodation and other toilet facilities in the day nurseries.

TUBERCULOSIS SERVICE

The arrangements for prevention, care and after-care, in regard to the tuberculous patient have continued to be administered by the local authority and under Section 28 of the National Health Service Act, 1946, the following services are provided:—

- The visiting and supervision of patients and their families by 14 tuberculosis health visitors and 1 tuberculosis inspector.
- The loan of beds and bedding, free of charge, to assist treatment and to secure isolation of the patient.
- The provision of food grants and clothing to patients and their families whose incomes fall below a set scale.
- The loan of nursing requisites, free of charge, to patients on domiciliary care.
- The free distribution of sputum boxes and flasks.
- The disinfection of premises, bedding and clothing.
- The rehabilitation and colonization of patients in village settlements.
- Assistance in rehousing.
- Financial advice in regard to entitlement to National Assistance etc.
- Co-operation with the Ministry of Labour in regard to placing selected patients in employment.

On the 31st December, 1955, 808 patients were receiving hospital treatment and 27 were awaiting admission, a reduction of 43 on the figure for 1954.

The chronic infectious case living in overcrowded conditions, and in hostels and lodging houses, is still a problem and during the year, under Section 169 of the Public Health Act, 1936, an unco-operative patient with active disease was compulsorily removed from a municipal hostel to a hospital for 3 months, until he became non-infectious.

In collaboration with the Manchester Regional Hospital Board a health survey by 2 mass miniature radiography units of an area in the City where the incidence of tuberculosis has been most marked, was commenced in November 1955, but the results are not yet to hand.

Notification

The notification figures for new cases of pulmonary tuberculosis show a reduction of 10 on the figures for the previous year, being 662 as compared with 672 in 1954.

377 cases were notified amongst males, a reduction of 18 from the 1954 figure. Females numbered 285, an increase of 8 over the 1954 total.

The non-respiratory cases notified were 77 as compared with 107 in 1954, males numbering 43 and females 34.

In both respiratory and non-respiratory tuberculosis new low figures are recorded for Manchester.

ortality

espiratory tuberculosis

The Registrar-General's figure of 130 shows a substantial reduction of 58 the number of deaths, made up of 45 males and 13 females.

on-respiratory tuberculosis

5 males and 9 females died from non-respiratory tuberculosis, a reduction f 6 males and 1 female from the 1954 figures.

Summary of the work of the section

uberculosis health visitors:—

Primary investigations	886
Domiciliary visits	21,946
Post-death visits	119
Chest clinic sessions	866

ssistance to patients and families:—

Food grants	85
Loan of beds and bedding	76
Loan of nursing requisites	29

putum boxes issued	31,860
putum flasks issued	39

isinfections by Corporation:—

Premises	451
Bedding	31

ousing applications:—

Cases referred by Housing Department	452
Cases recommended	227
Families re-housed during the year	158

.C.G. vaccination

3,825 vaccinations have been carried out since the scheme was started in 951, most of these being contacts of tuberculous patients. Some student urses and hospital workers, who were Mantoux negative, were also vaccinated, ut these formed only a small proportion of the total figure.

The following table is a record of the work of the B.C.G. Clinic since arch 1951:—

Year	Number of B.C.G. sessions	Number of Mantoux and Jelly Patch Tests	B.C.G. vaccinations
1951	64	2,044	507
1952	99	3,093	881
1953	93	3,382	872
1954	89	3,536	777
1955	94	3,612	788

The statistics for the year are shown in the following tables:—

Primary notifications of and deaths from tuberculosis

Comparative figures 1935—1955

(Rates per thousand of the population)

Year	Primary notifications						General death rate, M/cr.	Death rate all respiratory diseases except tuberculosis (M/cr.)	Death rates, tuberculosis Manchester						De ra res rat tul cul Eng an W.
	Respiratory			Non-respiratory					Respiratory			Non-respiratory			
	M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate			M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate	
1935	1·59	1·00	1·28	0·40	0·38	0·39	13·53	1·73	1·21	0·72	0·95	0·13	0·12	0·13	0·5
1936	1·47	1·07	1·26	0·43	0·35	0·39	13·72	1·83	1·13	0·70	0·90	0·15	0·13	0·14	0·5
1937	1·73	1·03	1·36	0·52	0·46	0·49	13·87	1·70	1·14	0·72	0·92	0·18	0·14	0·16	0·5
1938	1·52	0·98	1·24	0·41	0·36	0·38	12·61	1·32	1·07	0·66	0·86	0·14	0·13	0·14	0·5
1939	1·49	0·96	1·21	0·40	0·36	0·38	13·39	1·30	1·10	0·64	0·86	0·16	0·13	0·14	0·5
1940	1·95	1·13	1·51	0·41	0·36	0·38	17·98	4·00	1·43	0·78	1·09	0·16	0·13	0·15	0·
1941	2·12	1·16	1·61	0·45	0·41	0·43	16·64	2·81	1·45	0·84	1·13	0·19	0·19	0·19	0·6
1942	1·78	1·22	1·48	0·37	0·41	0·39	14·72	2·13	1·23	0·76	0·99	0·14	0·12	0·13	0·5
1943	1·78	1·25	1·50	0·41	0·49	0·45	15·50	2·64	1·14	0·71	0·91	0·16	0·15	0·16	0·5
1944	1·62	1·14	1·37	0·33	0·36	0·34	14·20	2·04	0·95	0·66	0·80	0·13	0·10	0·11	0·5
1945	1·73	1·23	1·46	0·34	0·31	0·32	14·41	2·33	1·00	0·62	0·80	0·16	0·10	0·13	0·
1946	1·56	0·89	1·20	0·28	0·22	0·25	13·52	2·09	0·92	0·48	0·69	0·08	0·12	0·10	0·4
1947	1·41	0·91	1·15	0·21	0·18	0·19	13·79	2·11	0·88	0·46	0·66	0·11	0·08	0·09	0·4
1948	1·50	1·01	1·24	0·19	0·21	0·20	12·27	1·80	0·89	0·50	0·69	0·06	0·08	0·07	0·4
1949	1·58	1·02	1·28	0·20	0·24	0·22	12·91	2·10	0·76	0·45	0·60	0·06	0·04	0·05	0 4
1950	1·28	0·84	1·05	0·21	0·17	0·19	12·77	1·86	0·77	0·42	0·58	0·07	0·06	0·07	0
1951	1·23	0·82	1·02	0·13	0·17	0·15	13·82	2·50	0·61	0·32	0·45	0·05	0·06	0·06	0·
1952	1·32	0·75	1·02	0·13	0·14	0·14	12·16	1·70	0·59	0·20	0·38	0·04	0·03	0·03	0·
1953	1.32	0·83	1·06	0·12	0·14	0·13	12·31	1·86	0·39	0·19	0·28	0·04	0.02	0·03	0·1
1954	1·20	0·75	0·96	0·15	0·16	0·15	12·20	1·73	0·40	0·15	0·27	0·03	0·03	0·03	0·
1955	1·16	0·78	0·96	0·13	0·09	0·11	12·68	1·93	0·26	0·12	0·19	0·02	0·02	0·02	0·1

Tuberculosis (pulmonary and non-pulmonary)

Incidence and deaths in age groups for the years 1931 to 1955

Year	0 —				1 —				5 —				15 —				45 —				65 —				Total				Total	
	Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		All forms	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1931	1	4	10	10	10	4	83	42	135	17	174	19	762	525	179	45	296	276	28	13	25	35	7	4	1,229	861	481	133	1,710	994
2	1	2	6	7	24	11	69	35	60	14	130	28	710	455	154	33	243	254	26	11	23	30	3	5	1,061	766	388	199	1,449	885
3	3	2	6	8	11	10	46	19	44	13	110	15	701	498	120	45	268	245	21	10	26	23	1	3	1,053	791	304	100	1,357	891
4	—	4	7	9	8	8	52	23	54	12	105	27	666	449	120	50	258	252	17	9	40	36	2	2	1,026	761	303	120	1,329	881
5	3	4	3	3	8	2	45	17	62	11	98	15	611	430	120	42	253	230	22	16	20	37	6	1	957	714	294	94	1,251	808
6	1	1	4	6	5	3	50	21	49	17	98	25	615	396	109	36	235	223	25	15	32	31	3	2	937	671	289	105	1,226	776
7	1	2	9	6	11	7	53	22	48	5	100	19	635	396	165	44	261	213	22	17	45	51	9	7	1,001	674	358	115	1,359	789
8	6	1	9	10	7	3	38	15	54	8	87	24	577	350	124	29	231	235	18	15	32	30	6	6	907	627	282	99	1,189	726
9	3	1	3	3	8	3	43	23	34	6	66	14	559	355	126	41	205	202	22	14	40	34	5	5	849	601	265	100	1,114	701
1940	3	3	2	3	4	1	28	21	31	6	68	13	620	408	112	39	242	208	23	11	43	52	6	4	943	678	239	91	1,182	769
1	3	—	3	2	14	5	46	35	36	6	68	18	610	366	124	42	266	241	13	11	39	61	4	7	968	679	258	115	1,226	794
2	—	1	2	5	5	1	31	15	35	5	57	12	615	338	119	34	209	206	24	9	30	41	1	5	894	592	234	80	1,128	672
3	1	1	4	3	11	2	29	20	29	4	68	14	614	291	138	41	211	212	26	13	34	36	7	2	900	546	272	93	1,172	639
4	2	—	3	5	18	3	32	13	41	4	39	12	522	275	114	21	213	174	20	14	44	35	3	3	840	491	211	68	1,051	559
5	3	3	6	4	19	2	28	22	35	7	57	14	606	257	91	28	213	177	15	8	37	50	3	5	913	496	200	81	1,113	577
6	5	3	5	9	12	—	29	14	44	3	44	10	517	232	71	22	195	171	13	11	32	51	6	1	805	460	168	67	973	527
7	3	4	2	6	24	5	17	14	60	1	38	9	482	236	59	25	190	176	13	6	27	28	5	4	786	450	134	64	920	514
8	4	2	3	5	33	5	16	8	42	3	36	8	545	261	66	14	198	176	18	6	41	30	2	8	863	477	141	49	1,004	526
9	7	1	—	3	29	4	17	7	62	—	36	4	566	220	81	14	194	150	12	6	41	43	8	4	899	418	154	38	1,053	456
1950	6	—	1	2	32	3	22	7	48	2	34	2	449	210	61	23	166	159	10	8	36	37	4	5	737	411	132	47	869	458
1951	11	2	2	2	38	—	13	7	48	—	20	6	449	134	56	15	146	134	11	7	19	48	3	2	711	318	105	39	816	357
1952	4	—	1	1	40	4	14	5	76	—	27	4	416	91	46	5	151	130	6	6	30	44	2	3	717	269	96	24	813	293
1953	7	—	2	—	33	1	7	2	63	—	28	—	460	67	38	8	143	96	14	7	36	34	4	1	742	198	93	18	835	216
1954	6	—	2	2	22	—	7	1	54	—	17	2	406	67	58	8	149	79	13	3	35	42	10	5	672	188	107	21	779	209
1955	7	—	1	—	38	—	7	4	54	—	10	1	381	43	44	4	161	55	9	1	21	32	6	4	662	130	77	14	739	144

Tuberculosis (non-respiratory)—new cases notified during 1955—age groups and site

Age groups	LOCATION OF DISEASE																	
	Meninges		Miliary		Abdomen		Bones joints		Vertebral column		Lymphatic system		Genito-urinary		Other sites		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
0— 4	3	1	—	—	—	—	—	2	—	—	1	1	—	—	—	—	4	4
5— 9	2	—	—	—	—	—	1	—	1	—	3	—	—	—	—	—	7	—
10—14	1	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	2	1
15—19	—	—	—	—	—	3	3	—	2	1	1	—	—	—	—	—	6	4
20—24	—	—	—	—	—	—	—	2	—	1	2	1	1	1	—	—	3	5
25—34	—	1	—	—	1	1	—	1	1	—	1	3	2	—	—	—	5	6
35—44	—	—	—	—	—	—	1	1	—	—	—	2	5	4	2	—	8	7
45—54	—	—	—	—	—	1	—	—	1	—	—	—	—	—	1	1	2	2
55—64	—	—	—	—	—	—	1	—	—	—	1	1	—	—	2	—	4	1
65—	—	—	—	—	—	—	1	1	1	2	—	—	—	—	—	1	2	4
Totals ..	6	3	—	—	1	5	8	7	6	4	9	8	8	5	5	2	43	34

Sources of notification of tuberculosis during 1955

Source	Respiratory	Non-respiratory	Totals
Private practitioners	329	8	337
Chest Clinic staff	149	1	150
General hospitals	166	65	231
Mental hospitals	—	1	1
Sanatoria	9	2	11
H.M. Forces	9	—	9
Other sources	—	—	—
Totals	662	77	739

Tuberculosis

Primary notifications and deaths—1955

Classification in municipal wards

Ward	Estimated population	Persons per acre	Notifications: Respiratory M.	Notifications: Respiratory F.	Notifications: Non-respiratory M.	Notifications: Non-respiratory F.	Notifications: Total all forms	Notifications: Rate per 1,000 pop.	Deaths (all forms): No. (Manchester figures)	Deaths (all forms): Rate per 1,000 pop.
exandra Park	21,242	27·23	9	5	2	2	18	0·85	4	0·19
Saints'	18,146	57·61	18	19	2	—	39	2·15	8	0·44
dwick	17,201	39·45	8	15	1	1	25	1·45	7	0·41
guley	18,402	13·10	12	8	—	—	20	1·09	2	0·11
rlow Moor	15,404	13·75	9	6	—	1	16	1·04	1	0·06
nchill	17,566	17·10	10	7	—	1	18	1·02	8	0·46
swick	18,982	78·12	11	8	—	1	20	1·05	6	0·32
ckley	21,731	17·73	10	5	1	1	17	0·78	4	0·18
adford	22,326	28·92	8	11	3	1	23	1·03	3	0·13
rnage	21,746	29·51	9	6	—	2	17	0·78	1	0·05
eetham	13,840	31·03	10	6	—	2	18	1·30	3	0·22
orlton-cum-Hardy	19,774	23·29	10	7	1	—	18	0·91	6	0·30
llegiate Church	13,215	26·38	13	5	4	1	23	1·74	5	0·38
umpsall	23,078	12·79	5	7	1	1	14	0·61	6	0·26
dsbury	17,431	14·76	6	5	—	1	12	0·69	1	0·06
rton North	22,746	42·12	8	7	3	1	19	0·84	2	0·09
rton South	17,156	27·19	10	5	2	—	17	0·99	3	0·17
rpurhey	18,623	48·45	9	5	1	2	17	0·94	5	0·28
gh Oldham	17,949	36·04	8	17	—	1	26	1·45	5	0·28
venshulme	18,959	31·29	6	6	1	2	15	0·79	2	0·11
ghtbowne	19,699	50·51	5	6	—	1	12	0·61	3	0·15
ngsight	15,404	43·39	10	5	—	—	15	0·97	1	0·06
les Platting	14,241	32·07	9	3	—	1	13	0·91	1	0·07
ss Side East	18,425	66·52	14	12	5	2	33	1·79	3	0·16
ss Side West	17,512	65·34	14	12	3	3	32	1·83	6	0·34
ston	20,283	17·34	6	7	1	1	15	0·74	2	0·10
w Cross	13,771	38·90	14	8	2	—	24	1·74	4	0·29
wton Heath	18,566	20·51	9	4	2	2	17	0·92	7	0·38
rthenden	21,020	11·92	11	7	—	1	19	0·90	1	0·05
d Moat	16,749	26·84	7	7	—	—	14	0·84	6	0·36
enshaw	22,227	40·93	8	9	1	—	18	0·81	—	—
sholme	16,756	23·08	11	6	3	1	21	1·25	2	0·12
. George's	18,367	57·76	14	7	1	—	22	1·20	4	0·22
. Luke's	17,650	61·50	15	14	—	—	29	1·64	3	0·17
. Mark's	20,897	40·42	14	7	2	1	24	1·15	10	0·48
. Peter's	10,978	13·12	5	3	—	—	8	0·73	4	0·36
ithington	15.239	27·21	4	2	—	—	6	0·39	1	0·07
oodhouse Park	19,949	13·66	16	6	1	—	23	1·18	4	0·21
nclassified	—	—	2	—	—	—	2	—	—	—
CITY OF MANCHESTER	692,200	25·40	377	285	43	34	739	1·06	144	0·21

Primary notifications respiratory tuberculosis—1955
Occupation and social classification*

MALES						OCCUPATIONAL GROUP	SINGLE WOMEN						MARRIED WOMEN						Total women	Total both sexes
Social class					Total		Social class					Total	Social class					Total		
1	2	3	4	5			1	2	3	4	5		1	2	3	4	5			
—	—	—	—	—	—	Fishermen	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Agricultural, horticultural and forestry occupations	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	1	1	—	2	Mining and quarrying occupations	—	—	—	—	—	—	—	—	—	—	—	—	—	2
—	—	—	—	—	—	Workers—non-metalliferous mining products (not coal)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	1	2	—	3	Coal gas, coke makers, workers in chemical and allied trades	—	—	—	—	—	—	—	—	—	—	—	—	—	3
—	—	57	—	—	57	Workers in metal manufacture, engineering and allied trades	—	—	1	—	—	1	—	—	2	—	—	2	3	60
—	—	2	2	—	4	Textile workers	—	—	1	3	—	4	—	—	3	1	—	4	8	12
—	—	—	—	—	—	Tanners, etc., leather goods makers, fur dressers	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	4	3	—	7	Makers of textile goods and articles of dress (not boots, shoes)	—	—	2	6	—	8	—	—	1	12	—	13	21	28
—	—	1	—	—	1	Makers of foods, drinks and tobacco	—	—	—	—	—	—	—	—	1	1	—	2	2	3
—	—	7	1	—	8	Workers in wood, cane and cork	—	—	—	—	—	—	—	—	—	—	—	—	—	8
—	—	6	1	—	7	Makers of and workers—paper, paperboard: bookbinders, printers	—	—	2	1	—	3	—	—	2	—	—	2	5	12
—	—	6	—	—	6	Makers of products (not elsewhere specified)	—	—	1	—	—	1	—	—	2	—	—	2	3	9
—	—	6	1	11	18	Workers in building and contracting	—	—	—	—	—	—	—	—	—	—	—	—	—	18
—	—	3	—	—	3	Painters and decorators	—	—	—	—	—	—	—	—	1	—	—	1	1	4
—	6	—	—	—	6	Administrators, directors, managers (not elsewhere specified)	—	—	—	—	—	—	—	—	—	—	—	—	—	6
1	1	22	4	3	31	Persons employed in transport and communications	—	—	3	—	—	3	—	—	—	—	—	—	3	34
—	3	16	—	4	23	Commercial finance and insurance occupations (not clerks)	—	—	4	—	—	4	—	—	5	—	1	6	10	33
1	7	1	—	—	9	Professional and technical occupations (not clerks)	—	5	1	—	—	6	—	1	—	—	—	1	7	16
1	—	9	—	1	11	Persons employed in defence services	—	—	1	—	—	1	—	—	—	—	—	—	1	12
—	—	1	—	—	1	Persons professionally engaged in entertainments and sport	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	1	8	9	2	20	Persons engaged in personal service (including institutions, clubs, etc.)	—	—	3	4	1	8	—	—	2	5	9	16	24	41
—	5	21	—	—	26	Clerks, typists, etc.	—	1	35	—	—	36	—	—	10	—	—	10	46	72
—	—	9	5	3	17	Warehousemen, storekeepers, packers, bottlers	—	—	2	6	—	8	—	—	—	3	—	3	11	28
—	—	1	1	—	2	Stationary engine, crane and tractor drivers, stokers, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	2
—	—	—	3	21	24	Workers in unskilled occupations (not elsewhere specified)	—	—	—	2	2	4	—	—	—	3	2	5	9	33
—	—	—	4	—	4	Other and undefined workers	—	—	—	—	—	—	—	—	—	1	—	1	1	5
3	23	182	37	45	290	Totals	—	6	56	22	3	87	—	1	29	26	12	68	155	445
—	—	—	—	—	18	Retired	—	—	—	—	—	—	—	—	—	—	—	—	—	18
—	—	—	—	—	20	No occupations (inmates of institutions, etc.)	—	—	—	—	—	4	—	—	—	—	—	—	4	24
—	—	—	—	—	20	Infants (0—4 years)	—	—	—	—	—	25	—	—	—	—	—	—	25	45
—	—	—	—	—	28	School children	—	—	—	—	—	28	—	—	—	—	—	—	28	56
—	—	—	—	—	1	Students	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	—	—	—	—	—	Household duties	—	—	—	—	—	3	—	—	—	—	—	70	73	73
—	—	—	—	—	377	Totals	—	—	—	—	—	147	—	—	—	—	—	138	285	662

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* Based on the 1950 classification of occupations and social groups used by the Registrar General

Return showing the work of the Manchester Chest Clinic

	Respiratory			Non-respiratory			All forms			Total
	M.	F.	C.	M.	F.	C.	M.	F.	C.	
Number of patients diagnosed as tuberculous	382	253	90	3	2	11	385	255	101	741
Number of contacts diagnosed as tuberculous	14	19	25	—	—	3	14	19	28	61
Number of patients taken off the register as "recovered"	94	87	24	13	18	3	107	105	27	239
Number of cases on the register at 1st January, 1955	2243	1780	389	57	54	24	2300	1834	413	4547
Number of cases on the register at 31st December, 1955	2248	1771	372	23	13	13	2271	1784	385	4440
Number of patients on the register awaiting admission to sanatoria at 31st December, 1955	16	9	2	—	—	—	16	9	2	27

Total attendances	34,089
Total new patients seen	7,683
Total X-rays taken	39,978
Total clinical sessions	1,771

Cases on the notification register at January, 1956

City Ward	Respiratory		Total	Non-respiratory		Total	Grand total
	Active	In-active		Active	In-active		
Alexandra Park	57	49	106	5	7	12	118
All Saints'	90	58	148	10	11	21	169
Ardwick	75	35	110	5	7	12	122
Baguley	125	156	281	3	13	16	297
Barlow Moor	44	45	89	1	4	5	94
Benchill	142	126	268	6	23	29	297
Beswick	62	23	85	1	8	9	94
Blackley	103	60	163	4	6	10	173
Bradford	62	65	127	1	10	11	138
Burnage	79	59	138	3	10	13	151
Cheetham	50	35	85	3	3	6	91
Chorlton-cum-Hardy	49	42	91	5	5	10	101
Collegiate Church	57	44	101	2	6	8	109
Crumpsall	85	62	147	2	5	7	154
Didsbury	41	27	68	1	5	6	74
Gorton North	65	40	105	5	7	12	117
Gorton South	63	40	103	4	9	13	116
Harpurhey	57	36	93	2	8	10	103
Hugh Oldham	62	34	96	3	9	12	108
Levenshulme	49	35	84	3	3	6	90
Lightbowne	43	38	81	5	3	8	89
Longsight	71	36	107	3	9	12	119
Miles Platting..	42	20	62	2	10	12	74
Moss Side East	79	53	132	6	6	12	144
Moss Side West	69	48	117	4	10	14	131
Moston	54	49	103	3	8	11	114
New Cross	53	25	78	4	5	9	87
Newton Heath	63	34	97	6	9	15	112
Northenden	150	123	273	3	12	15	288
Old Moat	58	52	110	2	10	12	122
Openshaw	79	40	119	5	8	13	132
Rusholme	46	35	81	2	12	14	95
St. George's	71	45	116	2	6	8	124
St. Luke's	75	50	125	5	10	15	140
St. Mark's	64	65	129	4	10	14	143
St. Peter's	32	12	44	2	4	6	50
Withington	27	30	57	—	1	1	58
Woodhouse Park	200	200	400	2	15	17	417
Unclassified	—	—	—	—	—	—	—
Totals—January, 1956 ..	2,693	2,026	4,719	129	307	436	5,155
January, 1955 ..	3,165	1,416	4,581	173	316	489	5,070
January, 1954 ..	3,342	1,184	4,526	277	294	571	5,097
January, 1953 ..	3,253	1,134	4,387	431	213	644	5,031
January, 1952 ..	2,983	1,338	4,321	505	412	917	5,238

Summary of notifications of tuberculosis during the period 1st January to 31st December, 1955, in the City

Age periods	Formal notifications													
	Number of primary notifications of new cases of tuberculosis													
	0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	Totals (all ages)
ory, males	4	4	12	9	19	33	25	77	47	79	49	13	6	377
ory, females	3	4	18	11	15	40	66	65	28	21	12	2	—	285
iratory, males	1	—	3	7	2	6	3	5	8	2	4	2	—	43
iratory, females	—	1	3	—	1	4	5	6	7	2	1	2	2	34

New cases of tuberculosis coming to the knowledge of the Medical Officer of Health during the above-mentioned period, otherwise than by formal notification

Source of nformation			Number of cases in age groups													
			0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	Totals
h returns from al registrars	Respiratory	M.	—	—	—	—	—	—	—	—	5	1	6	5	—	17 (A)
		F.	—	—	—	—	—	—	1	1	—	1	1	—	—	4 (B)
	Non-respiratory	M.	—	—	—	—	—	1	—	—	1	—	—	—	—	2 (C)
		F.	—	—	—	—	—	1	1	—	—	—	2	—	2	6 (D)
h returns from istrar General sferable deaths)	Respiratory	M.	—	—	—	—	—	—	—	—	—	—	1	—	—	1 (A)
		F.	—	—	—	—	—	—	—	—	1	—	—	—	—	1 (B)
	Non-respiratory	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (C)
		F.	—	—	—	—	—	—	—	—	—	—	—	—	1	1 (D)
'osthumous otifications	Respiratory	M.	—	—	—	—	—	—	—	—	—	1	—	3	1	5 (A)
		F.	—	—	—	—	—	—	—	—	—	—	1	—	1	2 (B)
	Non-respiratory	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	— (C)
		F.	—	—	—	—	—	—	—	—	—	—	—	—	1	1 (D)
ansfers " from areas (excluding nsferable deaths)	Respiratory	M.	—	—	—	—	1	—	7	11	9	5	3	1	—	37 (A)
		F.	—	—	—	1	2	1	14	9	3	1	—	—	—	31 (B)
	Non-respiratory	M.	—	—	1	—	—	—	1	—	—	—	—	1	—	3 (C)
		F.	—	—	—	—	—	1	1	1	—	2	—	—	—	5 (D)
ther sources	Respiratory	M.	—	—	—	—	—	—	1	1	3	—	—	—	—	5 (A)
		F.	—	—	—	—	—	—	—	2	—	—	—	—	—	2 (B)
	Non-respiratory	M.	—	—	—	—	—	—	—	—	—	1	—	—	—	1 (C)
		F.	—	—	—	—	—	1	1	—	—	—	—	—	—	2 (D)

Totals of cases		
(A)	Respiratory, male	65
(B)	Respiratory, female	40
(C)	Non-respiratory, male	6
(D)	Non-respiratory, female	15

Primary notifications—respiratory tuberculosis
Age, incidence and classification of cases seen by Chest Physicians
(Ministry of Health Circular 83/47 (1).)

Males

Age group	Respiratory A				Respiratory B				Total cases classified	Cases not classified for various reasons (2)	Total pri notificati
	1	2	3	Total	1	2	3	Total			
Under 1 yr.	1	—	2	3	—	—	—	—	3	1	4
1—2 yrs.	2	1	—	3	—	—	1	1	4	—	4
2—4 yrs.	5	1	—	6	—	—	—	—	6	6	12
5—9 yrs.	5	1	1	7	—	—	—	—	7	2	9
10—14 yrs.	11	1	—	12	1	—	1	2	14	5	19
15—19 yrs.	4	13	—	17	3	8	—	11	28	5	33
20—24 yrs.	3	5	1	9	1	14	—	15	24	1	25
25—34 yrs.	2	20	2	24	2	41	4	47	71	6	77
35—44 yrs.	—	6	—	6	3	32	4	39	45	2	47
45—54 yrs.	—	8	3	11	4	48	12	64	75	4	79
55—64 yrs.	1	7	2	10	1	22	12	35	45	4	49
65— yrs.	—	—	1	1	—	11	5	16	17	2	19
Totals ..	34	63	12	109	15	176	39	230	339	38	377
% **1955**	10·0	18·6	3·5	32·1	4·4	51·9	11·5	67·8	100		
% 1954	10·8	16·1	2·0	28·9	2·6	52·6	15·8	71·1	100		

Females

Age group	Respiratory A				Respiratory B				Total cases classified	Cases not classified for various reasons (2)	Total pri notificati
	1	2	3	Total	1	2	3	Total			
Under 1 yr.	1	1	1	3	—	—	—	—	3	—	3
1—2 yrs.	3	—	—	3	—	—	—	—	3	1	4
2—4 yrs.	10	3	4	17	—	—	—	—	17	1	18
5—9 yrs.	9	—	—	9	—	—	—	—	9	2	11
10—14 yrs.	6	4	3	13	—	1	—	1	14	1	15
15—19 yrs.	9	16	2	27	2	8	1	11	38	2	40
20—24 yrs.	7	25	1	33	1	24	4	29	62	4	66
25—34 yrs.	4	17	1	22	2	36	2	40	62	3	65
35—44 yrs.	1	5	1	7	—	14	6	20	27	1	28
45—54 yrs.	—	3	—	3	—	13	4	17	20	1	21
55—64 yrs.	2	1	—	3	—	3	2	5	8	4	12
65— yrs.	—	—	—	—	—	—	—	—	—	2	2
Totals ..	52	75	13	140	5	99	19	123	263	22	285
% **1955**	19·8	28·5	4·9	53·2	1·9	37·6	7·2	46·8	100		
% 1954	12·4	24·4	2·8	39·6	1·6	49·6	9·2	60·4	100		

Classification table—Notes.

(1) Class A.—Cases in which tubercle bacilli have never been discovered in any exudate, excrement, discharge or tiss

Class B.—Cases in which tubercle bacilli have been found at any time in any exudate, excrement, discharge or tiss

Group 1.—Cases with slight constitutional disturbance.

Group 3.—Cases with profound systematic disturbance or constitutional deterioration and with marked impairment function, either local or general.

Group 2.—All cases which cannot be placed in groups 1 and 3.

(2) In this column are included cases (*a*) where death occurred immediately after notification and before the Ch Physician had opportunity to see the patient ; (*b*) service cases ; (*c*) cases in mental hospitals, etc.,etc.

EPILEPSY AND CEREBRAL PALSY

All cases brought to the notice of the Department are referred to the School ealth Service in accordance with Section 34 of the Education Act, 1944. uring the year, 5 cases of epilepsy and 13 cases of cerebral palsy were referred. l were under the age of five years.

The following statement relates to epileptic and spastic children known to e School Health Services :—

ilepsy—

Children in Soss Moss Residential School	45
Children attending ordinary schools but under supervision	73

rebral Palsy—

Children in Margaret Barclay Residential School.. ..	18
Children in Lancasterian Day Special School	88
Children under orthopaedic treatment at clinics	36
Children in residential school not administered by Education Committee	1

The figures relate to children found to be suffering from the two defects d do not necessarily indicate the incidence of either disease in the City as ither condition is notifiable. There may be, for example, children suffering m so severe or so slight epilepsy or birth injury that they may never have been ought to the notice of the Department, particularly children over 10 years age.

Residential provision for sane epileptics aged 15 years or over, of both sexes, made under the terms of Part III, National Assistance Act, 1948, at the orporation's Langho Colony for sane epileptics. Details of the accommodation d facilities provided at this establishment are given elsewhere in the report.

HOME NURSING SERVICE

The general home nursing service is undertaken by the Manchester District ursing Institution on behalf of the Corporation. The Corporation has a ecial home nursing service for the care of premature babies and children ffering from eye conditions.

For the seventh consecutive year since the introduction of the National ealth Service in 1948 the number of patients nursed at home and the number f nursing visits have increased. 708 more patients were referred for home ursing in 1955 by comparison with the previous year—an increase of 5 per cent. his increase compares with an increase of only 0·5 per cent. in the previous ear and with an average annual increase of 17 per cent. in the previous four ears. The number of new patients last year registers an increase of 101 per cent. y comparison with 1949—the first complete year of the National Health Service.

Another way of looking at the volume of work is through the number of atients on the nurses' books. At the end of 1955 there were 2,666 patients eing nursed at home, which was an increase of 13 per cent. on the number of atients being nursed at the end of 1954, and represented an increase of no less an 254 per cent. by comparison with 1948 when there were 753 patients on he books.

The number of nursing visits has almost kept pace with the increase in the number of new patients, rising from 190,078 in 1949 to 361,749 in 1955—an increase of 90 per cent. It may be deduced from the above figures that the volume of work of the district nurses has doubled in the past seven years. The fact that the patients on the nurses' books have multiplied by three-and-a-hal times is due for the most part to an increase in the number of patients requirin infrequent injections, e.g. of mersalyl and hepastab.

Several factors which suggest that the cases referred for home nursing wil continue to grow for several years have been mentioned in previous reports viz. the growth in the proportion of aged persons in the population ; the trend towards treatment of a sick person in his own home wherever this is practicable ; and the increasing practice of general practitioners referring to the district nurse injections of antibiotic and other drugs. The latter development is commented upon at some length later in this report.

	1955	1954	*Per cent. increase on 1954*	*Per cent. increase on 1948*
Patients on books 1st January, 1955	2,366	1,920	23·2	290
Add—new patients	14,437	13,729	5·2	169
Total patients nursed ..	16,803	15,649	7·4	182
Deduct—patients taken off books	14,137	13,283	—	—
Patients on books 31st December	2,666	2,366	12·7	254

Classification of patients and nursing visits

A *Patients nursed*—

	1955	*Per cent.*	1954	*Per cent.*
Medical	13,825	82·3	12,890	82·4
Surgical	1,617	9·6	1,677	10·8
Infectious diseases	68	0·4	70	0·4
Tuberculosis	1,052	6·3	773	4·9
Maternal complications	239	1·4	239	1·5
Other	2	—	—	—
Totals	16,803	100·0	15,649	100·0

B *Nursing visits*—

	1955	*Per cent.*	1954	*Per cent.*
Medical	263,960	73·0	246,300	76·8
Surgical	42,398	11·7	41,268	12·9
Infectious diseases	1,960	0·5	1,362	0·4
Tuberculosis	51,348	14·2	30,030	9·3
Maternal complications	2,007	0·6	1,837	0·6
Other	76	—	—	—
Totals	361,749	100·0	320,797	100·0

Home Nursing Service—A visit by the district nurse.

Home Nursing Service—A male nurse makes his case notes.

Classification of new patients referred to the Home Nursing Service during the year

A *Diagnosis*—

	1955	Per cent.	1954	Per cent.	1953 Per cent.	1952 Per cent.
Infectious and notifiable diseases :						
(*a*) Influenza	45	0·3	53	0·4	0·8	0·8
(*b*) Primary pneumonia	412	2·8	449	3·3	4·1	3·5
(*c*) Bronchopneumonia	220	1·5	215	1·6	1·7	1·5
(*d*) Measles	14	0·1	21	0·1	0·1	0·2
(*e*) Whooping cough	26	0·2	12	0·1	0·1	0·1
(*f*) Pulmonary tuberculosis	817	5·7	611	4·5	4·0	2·6
(*g*) Non-pulmonary tuberculosis	56	0·4	69	0·5	0·3	0·4
(*h*) Erysipelas	16	0·1	20	0·1	0·2	0·2
(*i*) Other notifiable diseases	8	0·1	14	0·1	0·2	0·3
Total of (1)..	1,614	11·2	1,464	10·7	11·5	9·5
Diabetes	228	1·6	217	1·6	1·4	2·0
Anaemias	300	2·0	249	1·9	2·0	1·5
Bronchitis	1,277	8·9	1,141	8·3	9·8	8·0
Other respiratory diseases	633	4·4	447	3·2	4·1	3·5
Heart diseases	1,656	11·5	1,441	10·5	8·4	9·0
Cancer	569	3·9	534	3·9	4·7	5·0
Diseases of the circulatory system ..	340	2·3	322	2·3	2·6	3·5
Diseases of the nervous system	80	0·6	90	0·7	0·9	1·0
Uro-genital	115	0·8	105	0·7	0·8	1·5
Complication of pregnancy	35	0·2	49	0·4	0·4	0·5
Complication following childbirth ..	202	1·4	181	1·3	1·6	1·5
Other medical cases	5,996	41·6	6,023	43·9	37·0	34·0
Post-operative	580	4·0	550	4·0	4·2	5·0
Varicose ulcers	142	1·0	170	1·2	1·1	1·0
Other surgical	658	4·5	734	5·3	9·4	12·5
Operations	12	0·1	12	0·1	0·1	—
Totals	14,437	100·0	13,729	100·0	100·0	100·0

B *Age groups*—

Age group	1955	Per cent.	1954	Per cent.	1953 Per cent.	1948 Per cent.
-4	796	5·5	835	6·1	9·7	8·2
-14	658	4·6	876	6·4	7·7	5·1
-64	7,471	51·8	7,017	51·1	49·5	49·0
-74	2,947	20·4	2,747	20·0	18·2	37·7
and over	2,565	17·7	2,254	16·4	14·9	
Totals	14,437	100·0	13,729	100·0	100·0	100·0

crease in volume of injections

The number of injections carried out by the district nurse has substantially creased over the past few years both absolutely and in proportion to the total tients nursed. It is estimated that three out of every five patients on the nurse's ooks are given an injection of one type or another. Penicillin accounts for the ggest proportion of patients receiving an injection followed by streptomycin, ersalyl, cytamen, insulin, hepastab, etc. Some of the more seriously ill tients may require two injections a day for a time, whilst patients, for example, ffering from anaemia, may require an injection only once a week.

Only a small percentage of patients who receive an injection receive other nursing care such as a dressing, bed bath, or toilet preparation. Few of the patients however are ambulant or could be expected to walk or 'bus to the doctor's surgery to receive their injection. Where the patient is ambulant, for example, a patient suffering from tuberculosis who has recommenced work, arrangements are sometimes made for him to attend at the district nursing centre either before or after work to receive his injection. This saves the nurse travelling time but on the other hand it necessitates a nurse being available at the centre.

The age group categories of new patients show that the number of patients referred for home nursing in the 15–64 age-group (52 per cent.) is greater than all other patients put together. This is at first sight surprising until it is remembered that most patients in this middle age group are receiving injections.

Although injections account for some three-fifths of all patients and for about the same proportion of the total nursing visits, in time spent they will account for probably only one-half of the nurse's time. The general nursing care given to the older patients (and about one-quarter of all patients on the books are over the age of 75—mostly female patients) is time for time more onerous than the giving of injections.

One of the most striking developments over the past few years is the home treatment of tuberculosis. The number of tuberculosis patients on the books at 31st December rose from 93 in 1953 to 179 in 1954 and to 248 in 1955—increases of 92 per cent. and 39 per cent. respectively. Most of these patients, especially in the initial stages, need daily injections, and frequently remain on the books for twelve months. In December 1953, tuberculosis patients represented 5 per cent. of all patients being nursed at home. Two years later the percentage had risen to 9 per cent. The increase in nursing visits to this class of patient is even more remarkable and in 1955 no less than 51,348 visits were paid to tuberculosis patients out of a total of 361,749—14·2 per cent. The incidence is greatest in Northenden and Wythenshawe where tuberculosis patients represent 24 per cent. of the whole (84 out of a total of 357 patients on the books at 31st December 1955).

Nursing staff

The average number of district nurses at work during 1955 was 94½ of whom 74 were whole-time and 20½ part-time, giving an equivalent whole-time strength of 84½.

This figure of 84½ is analysed into :—

(*a*) *Nursing grades*—

	1955	1954	At 31–12–55
Queen's Senior Superintendent of home nursing	1	1	1
Queen's superintendents	4	4	4
Queen's assistant superintendents	2	3	2
Queen's district nurse tutor	1	—	1
Queen's female nurses	33	30¼	35½
Queen's male nurses	8½	9¼	8
Student district nurses	6	6½	9
State-registered nurses	24	19½	25
State-enrolled assistant nurses	5	5	4
	84½	78½	89½

(*b*) *Accommodation*—

	1955	1954
Resident in district nurses' home or centre under control of a superintendent	23	23¾
Non-resident, but working from nurses' home or centre under control of a superintendent	55½	49¼
Operating on "single" or "double" districts under ultimate control of a superintendent	6	5½
	84½	78½

Training

The Institution has three Training Homes for the training of State-registered nurses in home nursing at Ardwick, Harpurhey and Hulme. The normal course of training is six months but an abridged course of four months is permitted if the student holds certain midwifery or public health certificates or has a certain period of district nursing experience.

During 1955, 11 Manchester students were trained and sat for the Queen's Roll examination, compared with 15 in 1954 and 15 in 1948. The four weeks ecture block in the training course is thrown open to other training authorities n East Lancashire and during 1955, 31 students attended from Bolton, Bury, Rochdale, Salford and Stockport.

Transport

At 31st December, 1955, 18 motor cars, 5 motor cycles, and 5 powered ycles were in regular use " on the district ", as compared with 19 motor cars, motor cycles, and 6 powered cycles in 1954. Of the cars, 8 are the property of the Institution, and 4 the property of the Corporation. The remaining cars are owned by the nurses and travelling allowances granted. Most of the nurses use bicycles but a few either walk or use public transport. If as predicted the Home Nursing Service continues to develop the demand for district nurses will increase. Unfortunately, the supply of nurses as a whole is unlikely to ncrease very much over the next ten years, so that more and more consideration must be given to saving the district nurse's expenditure of time and energy, in particular reducing travelling time to a minimum. The district nurse can ormally undertake one-third additional visits with the aid of a car (except in congested urban areas) so that the motor car may be considered as a substitute or unrecruitable nurses (from a costs point of view) rather than an expensive uxury. A car also enables the nurse to arrive at her patient's house dry and warm in all weathers and this can be an important factor in maintaining a high tandard of work and in retaining staff. Nurses are encouraged to provide their wn cars for use on the district. The fact that only six nurses are claiming ravelling allowance is due to few nurses having their own cars. This is ttributable most probably to lack of capital.

ickroom equipment loans service

This service operated by the Institution in conjunction with the British Red Cross Society makes available the following articles for loan to patients—ir-rings ; bed-bottles ; bed-cradles ; bed-pans ; bed-rests ; bed-tables ; eeding cups ; hot-water bottles ; inhalers ; rubber sheets ; sputum mugs ; team kettles ; bed-linen (in emergency cases) ; lifting pole stands ; special-ype beds ; air-beds ; commodes ; walking aids and crutches. A small weekly ire charge is levied in respect of some of the heavier or more expensive types f equipment, but this is waived where it would inflict hardship.

The district nursing centres loan out equipment only to persons being ursed by them. The Red Cross issue equipment to these patients and also to ther persons in need provided that the application is supported by a doctor, idwife, health visitor, or district nurse. Red Cross centres are open at certain imes of the day in Chorlton-on-Medlock, Crumpsall, Didsbury, Newton Heath, Openshaw, Whalley Range, and Wythenshawe, and in Every Street, Ancoats the University Settlement).

Home nursing of sick children

The Health Committee has an establishment for three specially trained nurses for the care of premature babies in their own homes. Premature babies are nursed until they attain 6 lb. in weight and their condition is satisfactory.

Prepared and heated cots are available for use and may be obtained on the request of doctor or midwife.

The Health Committee also has an establishment for three State-registered nurses with special ophthalmic training and experience. They visit and treat at home under the direction of general medical practitioners, cases of eye disease in children from birth to school age.

Particulars of the cases dealt with by premature baby nurses and ophthalmic nurses are shown elsewhere in the Annual Report.

DARBISHIRE HOUSE HEALTH CENTRE

Darbishire House is an experimental health centre which is administered through the University of Manchester, by a Board of Management.

It is the object of the centre to provide :—

1. First-class medical care for the inhabitants of a densely populated city area.
2. A demonstration of the proper integration of preventive and curative services as represented by the personal health services of the loca authority, the family practitioner services, and the hospital-specialist services.
3. An instrument for undergraduate medical education which can be used to leaven the present emphasis given to hospital medicine.
4. The means of showing how medical care can take into account the social factors in the causation of disease in the individual and in the community, thus demonstrating the use of such a centre as an instrument of socio-medical research.

The cost of purchasing, adapting and equipping the centre, which was opened in April, 1954, was met by monies subscribed by the Nuffield Provincia Hospitals Trust and the Rockefeller Foundation. The research and teachin expenses are met by the University of Manchester and the Manchester Cit Council makes an annual grant, subject to review after three years, towards the costs of the centre in addition to the expenditure involved in staffing th maternity and child welfare and school health clinics.

Four medical practitioners, working as a group, practise at the centre wher there are facilities for X-ray examinations and routine pathological, bacterio logical and chemical tests. The nursing staff at the centre consists of thre district nurses paying home nursing visits and staffing a treatment room.

The cost of providing one of the nurses is met by the Home Nursing Servic and the cost of the remaining two nurses by the Board of Management.

Two of the nurses are Queen's district nurses and the third is a state registered nurse. All the nurses are interchangeable and on the average eac nurse spends one-third of her time on home nursing and two-thirds on nursin duties at the centre.

The population covered by the centre is about 14,000 at the present time.

Two infant and two ante-natal sessions weekly commenced in April, 1955 Welfare foods are issued at the infant sessions. Particulars of attendances etc are shown elsewhere in the report.

In December, four school medical services minor-ailment clinics weekl were commenced.

CONVALESCENCE

The number of patients admitted to convalescent homes has increased by 10 compared with the previous year. The numbers are 259 in the year 1954 and 9 in 1955.

The following particulars indicate the number of patients admitted to each nvalescent home :—

West Hill Convalescent Home, Southport	252
Blackburn and District Convalescent Home, St. Annes ..	21
Lear Home of Recovery, West Kirby	19
" Binswood " Rest Home, Manchester	42
Jewish Blind Society's Homes, Cliftonville	6
Hillary Nursing Home, Prestatyn (children)	9
Sefton House, Birkenhead (children)	3
" Beechways," Southport..	2
" Broomgrove " Convalescent Home, Liverpool (children)	12
Margaret Beavan Home, Heswall	2
St. Monica's Home, Kendal	1
Total	369

Recommendations for convalescence are received, mainly, from the patients' edical attendants but during the year a number of applications have been ceived from hospital almoners in respect of patients discharged from spital or attending out-patient departments.

HOME HELP SERVICE

During the period under review an expansion of the service was sanctioned the City Council with effect from 1st April, 1955. Until this date the total tablishment of home helps was 60 full-time female employees working a -hour week, but from 1st April, 1955, the establishment was increased to 0 full-time workers plus 50 part-time female employees.

Until 31st March, 1955, only 8 part-time helps were employed as reliefs r helps on holiday or on sick leave, but by the end of the year 22 part-time lps were employed and the number of full-time workers had been increased 72.

The actual number of full-time helps recruited during 1955 was 25 and of ese 12 resigned from the Service; 22 part-time helps were recruited and resigned. There was an average of 68 full-time workers and 13·5 part-time rkers employed during the year.

Most full-time helps and practically all the part-time helps are engaged on two or three cases of sickness, old age and infirmity each week, but nfinement cases are always provided with full-time assistance as less than s has proved to be inadequate.

Contributions towards the cost of the service are recovered from householders and such contributions may be assessed according to scales authorized the City Council.

Co-ordination of the Service is effected by the Organizer who visits persons questing help, supervises the work of the helps, allocates their duties to them, ruits and selects all new helps. In 1955 a total of 980 visits was made by Organizer who uses her own car for transport purposes and is paid a mileage owance.

The increasing use of the Service is illustrated by the following statement Likewise the number of applications for home helps continues to grow an there is evident need for further staff to be recruited up to full establishment

Cases attended by home helps

		1951	1952	1953	1954	195
Average number of helps employed:	Full-time	57	60	64	67	68
	Part-time	—	—	—	—	13·

Types of cases attended—	1951		1952		1953		1954		1955	
Confinement cases		252		177		166		211		3
Sickness cases and those of ..	F.T. 258		F.T. 173		F.T. 102		F.T. 127		F.T. 66	
old age and infirmity ..	P.T. 489		P.T. 851		P.T. 1,073		P.T. 1,160		P.T. 1,366	
		747		1,024		1,175		1,287		1,4
Totals		999		1,201		1,341		1,498		1,7

The increased amount of service being provided has only been possible b careful deployment of the limited number of home helps available and also b the willingness of the helps themselves to accept as much work as it has bee possible for them to do efficiently. In great measure the growing demand fo the services of home helps is directly attributable to the helps themselves wh maintain a consistently high standard of work.

The sources of application for the services of home helps

Source	Number in cases following confinement		Number in cases of sickness, old age, etc.		Totals	
	1955	1954	**1955**	1954	**1955**	1954
Personal application (by letter, telephone, or visit to the office by applicant or a representative) ..	274	234	570	579	844	813
Child welfare centres, health visitors, or midwives	143	136	156	146	299	282
Hospital almoners	8	4	195	184	203	18
Medical practitioners..	1	1	138	145	139	14
Tuberculosis Service	—	—	8	8	8	8
District Nursing Institution	—	—	22	27	22	27
Welfare Services Department	—	—	61	33	61	33
National Assistance Board	—	—	35	37	35	37
Cripples Aid Society	—	—	2	—	2	—
Blind Aid Society	—	—	11	9	11	9
Mental Health Service	—	—	9	3	9	3
Children's Department	—	—	5	—	5	—
Council of Social Service	—	—	9	3	9	3
Other sources	—	—	10	—	10	—
Totals	426	375	1,231	1,174	1,657	1,549

FAMILY WELFARE SERVICE

The Family Welfare Service was started in Manchester in 1948 and its aims e :—

- (*a*) to deal with adolescent problems and difficulties ;
- (*b*) to strengthen the ideas of responsibilities of the home by seeking to prevent the break-up of marriage and the alienation of children from their parents, and
- (*c*) to promote the adjustment of unhappy childless marriages.

The Service is directed by Lady Gertrude Jefferson, M.R.C.S., D.P.M., who is isted by doctors and a social worker, all with psychiatric experience. Each plicant is interviewed by a doctor but no physical examinations are made.

Sessions are held at two maternity and child welfare centres on Wednesday d Thursday afternoons, and a session is held on Monday evenings at the rbishire House Health Centre.

An annual grant is made to this Service by the City Council under powers nferred by Section 28 of the National Health Service Act, 1946.

The Medical Officer of Health is indebted to Lady Gertrude Jefferson for following report :—

"The year ending 31st December, 1955 has been an exceptionally strenuous t satisfactory one for the Family Welfare Service. It began with a very great ux of new cases following our move into Darbishire House for the Monday ning session in November, 1954, and an article in the Press appeared shortly rwards. The publicity thus given to our work continued to affect the volume applicants for the first quarter of the year. In the first three months we saw many cases as in the first six months of the preceding year.

The increased pressure was at first mainly felt at Darbishire House, and the in on our staff rose almost to breaking point and was particularly heavy for psychiatric social worker. We would have as many as 25 to 30 applicants e seen at one session, against a normal manageable attendance of 15 to 20. added complication was that these attendances were not staggered as they when applicants write for their appointments. It was of course quite ossible to deal adequately with these large numbers, particularly as we were erely handicapped by insufficient secretarial help. Fortunately at this ical time we received a most generous grant from the Nuffield Provincial spitals Trust which enabled us to add to our secretarial staff, and get some from a fourth doctor willing to come as a trainee.

By degrees this exceptional demand on our service settled down, and the ume of work levelled out over the three centres, and at the end of the year thington showed the greatest relative expansion, the number of new cases there during 1955 being double the number seen in 1954.

The figures below show the distribution.

INTERVIEWS

	1955	1954
Darbishire House	952	779
Yew Tree Lane	408	319
Withington	394	260
Total	1,754	1,358

New Cases

	1955	1954
Darbishire House	188	128
Yew Tree Lane	106	64
Withington	81	39
Total	375	231

Total number of applicants attending all centres:—

1955 .. 447 1954 .. 337

The sources of referral on the whole remain the same as before, with a satisfactory increase in the number of cases coming from doctors, especially at Wythenshawe and the new housing estate. Maternity and Child Welfare doctors and Health Visitors in the same district and elsewhere, are sending suitable cases to us, and we find this link with other public services a most rewarding one.

We have an easy and friendly contact with the doctors working in Darbishire House, and the cases they refer to us can be followed up if necessary by home visits from Miss Dongray, the University Social Worker at Darbishire House—a welcome link with the University. There has been an increase in the number of self-referrals due to the article in the Press. The Marriage Guidance Council continues to send us a large proportion of our cases. Other important sources in addition to those already mentioned are, Probation Officers, Almoners, and other social workers including clergy.

The age groups of the applicants and the problems presented remain much the same, with marital disharmony still the largest group.

The educational aspect of our service is developing. During the past year talks have been given by myself and staff to University students, the Social Services and various women's societies. I am about to give a course of four lectures for the Royal College of Nurses to Health Visitors from all parts of the country, on the problems of family life as met with in Family Welfare, and what constructive help Health Visitors can give in similar cases. We are regularly visited each year by students training in the work of the R.S.P.C.C. and other visitors from home and abroad. These various contacts with other social services bring an added interest to our work and form useful channels for the spread of ideals for the stabilization of family life".

VENEREAL DISEASES

The clinics for the treatment of mothers and children for venereal diseases were discontinued as from the 28th May. Prior to this date, one session weekly at each of two maternity and child welfare centres had been held.

The discontinuance of the clinics was due to declining attendances and to the fact that specialist clinics are held at certain hospitals in the city. All the patients attending the clinics at the centres prior to closure were given details of the hospital clinics, and new cases who attend at the maternity and child welfare centres are referred to the hospital clinics.

Particulars of attendances and treatment during the period 1st January to 28th May are shown in the accompanying Table which is in the form required in the Ministry of Health return.

		Totals	Males	Females
1	Patients under treatment or observation on 1st January	48	1	47
2	Patients removed from the register in previous years who returned during the year for treatment or observation of the same condition	1	—	1
3	Patients transferred from other centres after diagnosis	—	—	—
4	Patients dealt with for the first time (excluding 2 & 3) suffering from:-			
	Syphilis : primary	—	—	—
	,, secondary	—	—	—
	,, latent in the 1st year of infection	—	—	—
	,, cardio-vascular	—	—	—
	,, of the nervous system	—	—	—
	All other late of latent stages	5	—	5
	Syphilis congenital : aged under 1 year	—	—	—
	,, ,, aged 1 but under 5	—	—	—
	,, ,, aged 5 but under 15	—	—	—
	,, ,, aged 15 and over	—	—	—
	Total (Item 4)	5	—	5
5	Patients completing treatment and/or observation	17	—	17
6	Patients transferred elsewhere	19	1	18
7	Patients not completing treatment and/or observation	18	—	18
8	Patients under treatment or observation on 31st December	—	—	—
9	Patients under treatment or observation on 1st January	2	—	2
10	Patients removed from the register in previous years who returned during the year for treatment or observation of the same condition	—	—	—
11	Patients transferred from other centres after diagnosis	1	—	1
12	Patients dealt with for the first time (excluding Items 10 and 11)	1	—	1
13	Patients completing treatment and/or observation	2	—	2
14	Patients transferred elsewhere	1	—	1
15	Patients not completing treatment and/or observation	1	—	1
16	Patients under treatment or observation on 31st December	—	—	—
17	Patients under treatment or observation on 1st January	39	9	30
18	Patients removed from the register in previous years who returned during the year for treatment or observation of the same condition	—	—	—
19	Patients transferred from other centres after observation	—	—	—
20	Patients dealt with for the first time (excluding items 18 and 19) suffering from:-			
	Chancroid	—	—	—
	Lymphogranuloma venereum	—	—	—
	Granuloma inguinale	—	—	—
	Non-gonococcal urethritis	—	—	—
	Any other conditions requiring treatment	17	—	17
	Conditions not requiring treatment	54	12	42
	Undiagnosed conditions	—	—	—
	Total (Item 20)	71	12	59
21	Patients completing treatment and/or observation	110	21	89
22	Patients transferred elsewhere	—	—	—
23	Patients not completing treatment and/or observation	—	—	—
24	Patients under treatment or observation on 31st December	—	—	—

Attendances by patients :—	*Totals*	*Males*	*Females*
At which patients saw physician—			
Syphilis	186	—	186
Gonorrhoea	4	—	4
Other conditions	—	—	—
At which patients did not see physician—			
Syphilis	161	18	143
Gonorrhoea	—	—	—
Other conditions	—	—	—
Contacts attending for examination referred by patients suffering from :—			
Syphilis	—	—	—
Gonorrhoea	—	—	—
Non-gonococcal urethritis	—	—	—
Other conditions	—	—	—

Pathological work—Number of specimens examined :—	*By the physician at the centre*	*sent to a pathological centre*
Microscopical : for syphilis	—	—
,, others	—	93
Cultural	—	—
Serum : for syphilis	—	136
,, others	—	3
Cerebro spinal fluid (number of diagnostic lumbar punctures)	—	—

Section 3

Sanitary Services Division

- INTRODUCTION
- WATER SUPPLY
- FOOD SUPPLY:
  - Hygiene
  - Milk and ice cream control
  - Adulteration
  - Meat (Markets Department)
- SMOKE PREVENTION:
  - Industrial
  - Smokeless areas
  - Recording of atmospheric pollution
- HOUSING CONDITIONS:
  - Disrepair
  - Improvement grants
  - Demolitions
  - Pre-war clearance areas
  - Post-war clearance areas
  - Individually unfit houses
  - Re-housing: medical circumstances
  - Abatement of overcrowding
  - Houses let-in-lodgings
  - Common lodging-houses
  - Caravan dwellings
  - Canal boats
- OCCUPATIONAL CONDITIONS:
  - Factories
  - Factory outworkers
  - Shops and employment of young persons
- GENERAL SANITARY CONDITIONS:
  - Infectious diseases
  - Rodent control
  - Eradication of insect pests
  - Drainage works (defects and repairs)
  - Sanitary accommodation
  - Tipping of refuse
  - Offensive trades
  - Effluvium nuisances
  - Noise
  - Land used for pleasure fairs
  - Rag flock and other filling materials
  - Export of washed rags and second-hand clothing
  - Swimming baths
  - Establishments for massage or special treatment
  - Hairdressers and barbers
  - Sale of certain poisons
  - Exhumations
- PUBLIC CONVENIENCES
- PUBLIC ANALYST

SANITARY SERVICES DIVISION

J. Graham, F.S.I.A., M.R.S.I., Chief Sanitary Inspector

A serious reduction in the number of the sanitary inspectors recurred during the year, especially of district inspectors, and at the end of the year this amounted to approximately 40 per cent. of the establishment. Such a state of affairs causes acute concern and jeopardises the Division's endeavours to fulfil its statutory duties.

These responsibilities in dealing with housing conditions, food hygiene, air pollution, etc., are becoming increasingly onerous each year and the effective performance of the duties involved depends on the adequacy of the inspectorial service both in numbers and in experience. Recognition of this in the pre-war era resulted in a sufficiency of fully qualified and experienced inspectors: but in the post-war years there has been a progressive decrease in the numbers of experienced inspectors and a worsening in the retention or recruitment of inspectors. All this has coincided with a deterioration in the environmental factors with which their duties are concerned.

The high proportion of unfit houses in the City (approximately 68,000), and the number of unfit houses becoming so structurally dangerous as to require prompt demolition (640 during this year), provide an index of that deterioration so far as housing is concerned. It is also illustrative of the mass of work involved in inspections, reinspections and procedure to secure essential repairs on basically unfit property irrespective of the concurrently urgent need to deal speedily with such houses by way of slum clearance. Delay in securing attention to essential repairs is an issue of acute concern and whilst many factors are involved, the position is aggravated by staff depletions.

This position and comparable difficulties in other aspects of the Division's responsibilities, the efficient discharge of which is so dependent on the maintenance of regular inspections, has led to review of the whole circumstances with the Establishment Committee for further representations to be made to the National Joint Council on the grading of the inspectorate.

It is also recognised, however, that the Department's in-service training facilities originally adequate to maintain the Division's establishment which until post-war years rarely suffered loss by resignations to other authorities, cannot satisfy prevailing conditions. Accordingly, a special establishment of student inspectors has been created, whose training will be undertaken on the "sandwich" principle between Salford Royal Technical College and the Department.

One of the senior district inspectors, Mr. S. Brumat, was awarded the County of Lancaster Prize in Sanitary Science for a paper on some aspects of water supply. This prize originally established by the Liverpool Ladies Sanitary Association, is administered by the Sanitary Inspectors' Association and awarded annually in open competition.

Inspections and visits

Water	
To obtain samples of water for chemical and bacteriological examination	51
Food supply	
Restaurants and snack bars	721
Factory canteens	79
Bakehouses	297
Food preparation premises	140
Markets re sale of food	39
Shops re sale of food	1189
Hotels, beerhouses	256
Hawkers of food and storage premises	48
Dairies and milk shops for milk samples	254
Shops for other food and drugs samples	568
Observations at shops, markets, etc. re sampling	1511
Farms : "Appeal to Cow" samples, etc.	43
Registered premises of wholesale margarine dealers	87
Dairies	260
Pasteurizing and sterilizing plants	2210
Hospitals, schools and day nurseries	258
Shops selling bottled milk	206
Synthetic cream premises	48
Premises used for the manufacture of ice cream	271
Premises used for the sale of ice cream	1097
Smoke abatement	
Works, etc.	2452
Housing conditions	
Primary inspections of dwelling-houses under the Public Health Act, 1936	13850
Subsequent inspections of dwelling houses under the Public Health Act, 1936	33002
Primary inspections of dwelling houses under the Housing Act, 1936	1224
Subsequent inspections of dwelling houses under the Housing Act, 1936	1100
Overcrowding	21
Re-housing and medical cases	1533
Applications for improvement grants	141
Houses let-in-lodgings	303
Common lodging houses	108
Caravan dwellings	811
Canal boats	68
Supervision of work in default	6003
Occupational conditions	
Homes of outworkers	993
Factories	1390
Shops re Shops Act	1540
Other business premises	1686
Infectious diseases	
Primary visits after notification	2084
Subsequent visits	237
Contacts	465
Food poisoning	371

General sanitary conditions

Hospitals, institutions, nursing homes and agencies	58
Rat infestation	1158
Refuse tips	105
Verminous premises	215
Offensive trades	60
Effluvium nuisances	1107
Noise	253
Rag flock and other filling materials	28
Export of washed rags and second-hand clothing	22
Swimming baths	70
Establishments for massage or special treatment	128
Hairdressers and barbers shops—Manchester Corporation Act, 1950	78
Sale of certain poisons—Pharmacy and Poisons Act, 1933	159
Exhumations	9
Infirm persons	14
Cinemas, theatres, dance and billiard halls	118
Land used by pleasure fairs	109
Premises for the purpose of examination of drains	305
Rag and bone dealers' barrows	3
Land, refuse deposits, etc.	795
Cesspools, pailclosets, etc.	201
Water courses	100
Streets, passages, roadways and footpaths	1091
Railway stations	24
Stables	30
Piggeries	21
Slaughterhouses	3
Steam disinfectors	6
Sanitary accommodation etc., at schools, churches	62
Sanitary accommodation, etc., at parks	58
Public sanitary conveniences	126
Miscellaneous	21996

WATER SUPPLY

The two main sources of Manchester's water supply are Thirlmere and Haweswater, situated in the Lake District, and in addition reservoirs in the Longdendale Valley augment this supply by about 20 million gallons each day.

Service reservoirs at Prestwich, Heaton Park, Audenshaw, Godley, Denton, Gorton and Bowdon, together with trunk mains, secure distribution of the water and boosters are used where necessary to increase the pressure to the high level districts.

Thirty-two complaints of the discolouration of water or the presence of microscopic aquatic life were investigated and both in respect of these complaints and as a routine measure elsewhere, 40 water samples were taken for bacteriological examination and 41 for chemical analysis from 36 different premises.

As indicated in the accompanying tabular statement, 34 of the 40 bacteriological samples did not contain any coliform organisms and further samples obtained in respect of the other samples were found to be satisfactory. The Engineer and Manager of the Manchester Corporation Waterworks was informed of the results of all the examinations.

District	No. of samples	Samples free from coliform bacteria	Faecal coli found		Non-faecal coli found		Service reservoir or aqueduct	Source
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.		
Baguley	1	1	—	—	—	—	Thirlmere aqueduct	Thirlmere
Beswick	4	3	—	—	1	1	Audenshaw	Longdendale
Blackley	3	3	—	—	—	—	Heaton Park	Thirlmere and Haweswater
Burnage	1	1	—	—	—	—	Audenshaw	Longdendale
City	1	1	—	—	—	—	Audenshaw and Prestwich	Longdendale
Clayton	1	—	—	—	1	8	Godley	Longdendale
Chorlton-on-Medlock	3	3	—	—	—	—	Audenshaw	Longdendale
Collyhurst	3	2	—	—	1	160	Prestwich Audenshaw	Thirlmere Longdendale
Crumpsall	1	1	—	—	—	—	Heaton Park	Thirlmere and Haweswater
Didsbury	2	1	—	—	1	1	Audenshaw	Longdendale
Gorton	1	1	—	—	—	—	Audenshaw	Longdendale
Harpurhey	1	1	—	—	—	—	Heaton Park	Thirlmere and Haweswater
Hulme	1	1	—	—	—	—	Audenshaw	Longdendale
Levenshulme ..	2	2	—	—	—	—	Audenshaw	Longdendale
Moston	3	2	*1	1	*1	1	Heaton Park Godley	Thirlmere and Haweswater Longdendale
Newton..	1	1	—	—	—	—	Godley	Longdendale
Newton Heath ..	3	3	—	—	—	—	Godley	Longdendale
Northenden ..	1	1	—	—	—	—	Thirlmere aqueduct	Thirlmere
Rusholme	1	1	—	—	—	—	Audenshaw	Longdendale
West Gorton ..	1	1	—	—	—	—	Audenshaw	Longdendale
Whalley Range ..	1	—	—	—	1	1	Audenshaw	Longdendale
Withington.. ..	4	4	—	—	—	—	Audenshaw	Longdendale

* One sample contained both faecal and non-faecal coli.

A private water supply from a borehole in a Clayton works was examined and found to be satisfactory, but as a necessary precaution against risk of contamination certain work is being undertaken by the management concerned to improve the draw-off arrangements.

With the object of ensuring observance of appropriate practice to prevent back-flow from appliances into water service pipes, either by syphonage or otherwise, representatives of the Waterworks and Health Departments have discussed with the owners of particular buildings the risks involved and the arrangements to be made in respect of such installations.

During 1954 it was not necessary to serve any notices in respect of insufficient water supply but this year 7 preliminary notices concerning 18 houses and 9 statutory notices dealing with 26 houses had to be served. This action was usually necessitated by the disconnection of supplies from houses served by a common pipe through the pilfering and removal of lead piping. This has generally occurred when an individually unfit house had been vacated prior to demolition but other houses on the same service pipe have remained occupied.

In such circumstances unless owners have co-operated in restoring the service pipe and thereby the water supply, formal procedure under the Public Health Act, 1936, as amended by the Water Act, 1945, has been taken. This involves undue delay with considerable hardship and nuisance to occupiers of remaining houses. Accordingly, and having regard to the increasing incidence of individually unfit houses becoming so structurally dangerous as to require demolition, further statutory powers are being sought in the proposed Manchester Corporation Act, 1956, to enable prompt restoration of the water supply to occupied houses which have been deprived of a sufficient supply.

The Department having been acutely concerned with the unsatisfactory condition of the water supply to Langho Colony, not on the Manchester Waterworks' system, representations were made to the local authority, the waterworks undertaking concerned and the Ministry of Housing and Local Government. These have culminated in the provision of a satisfactory new source of supply under an agreement between the Corporation and the waterworks undertaking.

Concerning Manchester's water supply, the Engineer and Manager of the Waterworks Department has supplied the following information:—

> The water supply has been satisfactory both in quality and quantity.
>
> Regular samples are taken for bacteriological examination of the raw water and of the treated water going into supply. Out of 837 samples examined in 1955, 729 were found to be free from bacteria. Typical chemical analyses of the sources of supply are attached.
>
> The Thirlmere and Longdendale supplies are treated with hydrated lime. This has proved effective in limiting the maximum lead content found in samples given overnight contact with lead service pipes to less than 0·2 parts per million.
>
> It has proved impracticable to prevent access of seagulls to the larger service reservoirs. Pollution from this source is dealt with by chlorination at the outlets of the reservoirs.

TYPICAL ANALYSES

Thirlmere and Haweswater lakes

The supply from these lakes is subject only to slight variations and the following analyses are typical:—

	Thirlmere	*Haweswater*
pH value	6·0	6·6
Colour as p.p.m. platinum	12	7
Turbidity p.p.m. silica scale	2·5	0·8
	Parts per million	
Total solids dried at 180°C.	30	36
Free acidity as CO_2	4	1
Alkalinity as $CaCO_3$	5	10
Total hardness as $CaCO_3$	11	17
Chlorides as Cl_2	7	5
Nitrates as N_2	0·17	0·15
Ammoniacal nitrogen as N_2	0·02	0·02
Albuminoid nitrogen as N_2	0·03	0·05
Oxygen absorbed test, 4 hours at 27°C.	0.78	0·72
Silica as SiO_2	2·5	2
Iron as Fe	0·06	0·05
Manganese as Mn	nil	nil

THIRLMERE SUPPLY. *As taken from house taps.*

Date	Feb. 9th	Oct. 12th
Lab. No.	4521	4765
pH value	6·9	7·3
Colour as p.p.m. platinum	10	10
Turbidity p.p.m. silica scale	1·0	1·0
Odour: Cold or hot	nil	nil
Taste: Cold or hot	nil	nil
	Parts per million	
Total solids dried at 180°C.	36	38
Free acidity as CO_2	1	1
Alkalinity as $CaCO_3$	16	15
Total hardness as $CaCO_3$	18	18
Chlorides as Cl_2	7	9·5
Nitrates as N_2	0·51	0·23
Nitrites as N_2	0·002	0·012
Ammoniacal nitrogen as N_2	0·01	0·01
Albuminoid nitrogen as N_2	0·04	0·02
Oxygen absorbed test, 4 hours at 27°C.	0·64	0·58
Silica as SiO_2	2	2
Iron as Fe	0·20	0·08
Manganese as Mn	nil	0·01

HAWESWATER SUPPLY. *Taken at inlet into Heaton Park reservoir.*

The Aqueduct was officially opened on 21st June, 1955.

ANALYSES.

Date	June 27th	August 29th	December 19th
Lab. No.	4627	4716	4814
pH value	9·1	8·6	8·4
Colour as p.p.m. platinum	8	8	7
Turbidity p.p.m. silica scale	0·8	0·7	0·6
		Parts per million	
Total solids dried at 180°C.	67	52	47
Free acidity as CO_2	nil	nil	0·5
Free alkalinity as $CaCO_3$	13·5	2	nil
Total alkalinity as $CaCO_3$	34	25	14
Total hardness as $CaCO_3$	27·5	23	21
Chlorides as Cl_2	8	11	10
Oxygen absorbed test, 4 hours at 27°C.	0·51	0·41	0·40
Silica as SiO_2	2·5	2	2
Iron as Fe	0·06	0·08	0·08
Manganese as Mn	nil	nil	0·02

In the initial stages the water flowing down the aqueduct dissolved alkali from the fresh concrete, hence the relatively high pH value and substantial free and total alkalinity results. These high values were levelled out by admixture with the water already in the reservoir. In a few weeks the free alkalinity had practically disappeared and the pH value was reduced to a satisfactory figure.

LONGDENDALE AQUEDUCT SUPPLY. *Raw water.*

This supply, derived from the peaty Longdendale gathering ground, is subject to wide seasonal variations as indicated by the following results:—

pH value	4.0	to	6·5
Colour as p.p.m. platinum	17	to	76
Turbidity p.p.m. silica scale	3·5	to	11
	Parts per million		
Total solids dried at 180°C.	58	to	75
Free acidity as CO_2	4	to	10
Alkalinity as $CaCO_3$	nil	to	6
Total hardness as $CaCO_3$	24	to	34
Chlorides as Cl_2	9	to	13
Nitrates as N_2	0·4	to	0·6
Ammoniacal nitrogen as N_2	0·02	to	0·05
Albuminoid nitrogen as N_2	0·05	to	0·10
Oxygen absorbed test, 4 hours at 27°C.	0·8	to	2·9
Silica as SiO_2	7	to	11
Iron as Fe	0·18	to	0·84
Manganese as Mn	0·09	to	0·33

LONGDENDALE AQUEDUCT SUPPLY. *Taken as leaving Godley reservoir.*

Date	May 9th	October 24th
Lab. No.	4571	4772
pH value	8·6	8·8
Colour as p.p.m. platinum	23	64
Turbidity p.p.m. silica scale	7·8	7·8
Odour: Cold or hot	nil	nil
Taste: Cold or hot	nil	nil
	Parts per million	
Total solids dried at 180°C.	81	76
Free acidity as CO_2	nil	nil
Free alkalinity as $CaCO_3$	1	2
Total alkalinity as $CaCO_3$	13	11
Total hardness as $CaCO_3$	34·5	37
Chlorides as Cl_2	11	14
Nitrates as N_2	0·50	0·43
Nitrites as N_2	nil	nil
Ammoniacal nitrogen as N_2	0·14	0·18
Albuminoid nitrogen as N_2	0·05	0·09
Oxygen absorbed test, 4 hours at 27°C.	1·83	2·06
Silica as SiO_2	8	10
Iron as Fe	0·26	0·84
Manganese as Mn	0·11	0·14

NOTE.—This supply is sterilized by the chloramine process, which accounts for the bulk of the ammoniacal nitrogen present, as well as any traces of nitrites which may be present at times.

PLUMBO-SOLVENCY

LONGDENDALE SUPPLY

The untreated water has a marked plumbo-solvent action. It is treated with hydrated lime so as to raise the pH value of the distributed water to 7·0 to 8·5. Records show that such treated water left in contact with lead service pipes overnight has a lead content not exceeding 0·2 p.p.m. Pb.

THIRLMERE SUPPLY

The untreated lake water has a fairly low plumbo-solvent action. The water is treated with hydrated lime as it leaves the lake so as to raise the pH value of the water on distribution to around 7·0. Records show that the lead content of the water after standing in contact with lead service pipes overnight is definitely less than 0·2 p.p.m. Pb.

HAWESWATER SUPPLY

The untreated lake water has a low plumbo-solvent action. After flowing down the new aqueduct, the pH value of the water arriving in the town area is around 8·5 and its plumbo-solvent action is practically nil.

Aqueducts and service reservoirs

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
Aqueducts						
Haweswater	32	31	1	1	1	1
Longdendale..	50	16	30	1–160	32	1–160
Service reservoirs						
Audenshaw No. 1 ..	47	6	41	1–6000	41	1–2500
,, No. 2 ..	45	3	39	1–900	42	1–350
,, No. 3 ..	46	5	40	1–900	40	1–600
Denton No. 1	25	19	4	2–35	6	1–35
,, No. 2	25	13	11	1–600	12	1–600
Godley inlet	50	44	2	1–2	6	1–5
,, outlet	50	41	6	1–8	8	1–8
Heaton Park	47	7	40	1–1700	40	1–1700
Prestwich No. 1 ..	29	21	7	1–50	7	1–50

Water from Thirlmere lake is chlorinated in the aqueduct near the headworks and it is re-chlorinated before it enters the Manchester area of supply. Results for the supply distributed direct from the aqueduct are given in the next table.

Water from Haweswater lake is chlorinated in the aqueduct at Garnett Bridge, some 10 miles below the lake.

Longdendale aqueduct results represent the water prior to chlorination. The chlorinated water enters Godley reservoir and sufficient chlorine is added (as chloramine) to maintain a chlorine residual in the water leaving the reservoir.

The Audenshaw reservoirs receive very serious pollution by gulls between the end of July and end of March; the remainder of the time they are away at the breeding grounds. The magnitude of this problem may be realised by the fact that thousands of gulls return to these reservoirs in the evenings and depart again at daybreak for their feeding grounds. A method to try and scare the gulls from these reservoirs has been applied for two seasons. This consists of a recording of their scare calls played back through loudspeakers placed on rafts on the reservoirs at intervals during two hours around sunset each evening—the time the majority of the gulls return to rest. Nos. 2 and 3 reservoirs only have been so ‘ protected ’ as water is drawn directly from them into service, while No. 1 reservoir has been ‘ unprotected ’ to allow the gulls to use it for resting upon in preference to the other 2 reservoirs. The method has been a partial success as indicated by the maximum coli counts for the 3 reservoirs, but serious pollution of the ‘ protected ’ reservoirs still occurred. With this method, the chlorinated distributed water has been remarkably free from faecal coli.

Denton No. 2 reservoir water contained high coliform counts between the end of July and the end of September, part of which time the reservoir was out of service. The pollution was derived from starlings. Only 2 samples in this period exceeded a total coli count of 100 per 100 mls. Water sent into supply is chlorinated.

Godley outlet water represents the water entering the distribution system. Of the 6 samples with faecal coli present, 4 contained only 1, 1 contained 3 and the other 8 faecal coli per 100 mls., and 4 of these samples were taken during August and September. When faecal coli were found in the Godley outlet, samples on distribution were coli-free. This reservoir is subject to slight pollution by gulls.

The very high coliform bacteria counts found in the Heaton Park reservoir water are again due to serious contamination by gulls. The reservoir is treated with copper sulphate at times to reduce the very high coli counts.

Prestwich No. 1 reservoir received some pollution from the end of July to the beginning of September, presumably from birds. Only 1 sample contained 100 total coli per 100 mls., the rest showed 15 or less coli per 100 mls. Water sent into supply is chlorinated.

CHLORINATED WATER SUPPLIES ON DISTRIBUTION

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
Audenshaw	180	163	9	1–2 *a*	16	1–13 *a*
Denton	102	84	14	1–35 *b*	18	1–50 *b*
Godley	126	117	2	1–3 *c*	9	1–13 *c*
Heaton Park	161	120	17	1–90 *d*	41	1–90 *d*
Prestwich	134	118	2	1 *e*	16	1–160 *e*
Thirlmere aqueduct ..	134	127	4	1–13 *f*	6	1–13 *f*
Total	837	729	48	—	106	—

NOTES:—

(*a*) The 9 samples with faecal coli present were scattered over the year and 8 of these contained 1 faecal coli only per 100 mls., the remaining sample contained 2.

The bulk of the samples with non-faecal coli present were taken between the end of July and the end of October. Of the 16 samples, 11 contained only 1 non-faecal coli per 100 mls., 3 contained 2, 1 contained 8 and the other 13.

The bacteria found in the above 17 samples would be derived from 'aftergrowths' and/or disturbances of deposits in the mains, as on the same dates 22 other samples of this supply were coli-free.

(*b*) Serious 'aftergrowths' occurred on this supply between the middle of July and end of August, during which time some of the reservoir water samples were coli-free prior to chlorination. Disturbances in mains due to setting up waste detection areas accounted for some results.

Of the samples containing faecal coli, 6 contained 1 to 3 per 100 mls., 4 contained 5 to 8 and the remainder contained 11, 11, 25 and 35.

Of the 18 samples containing non-faecal coli, 6 samples contained 1 or 2 per 100 mls., 7 contained 5 or 8, and the remainder 11, 11, 25, 35 and 50.

On the same dates as the samples containing faecal and/or non-faecal coli were taken, 16 other samples on the supply were coli-free.

(*c*) Only 2 samples contained faecal coli and these were taken in July and August; the counts being 3 and 1 per 100 mls. respectively.

Of the 9 samples with non-faecal coli, 5 contained only 1 per 100 mls., 2 contained 2, 1 contained 8 and the other 13.

These results were due to 'aftergrowths' or slight local disturbances of deposits in mains, as 11 samples taken on this supply on the same dates were coli-free.

(*d*) The majority of the samples with coli present date from the return of the gulls to the reservoir in August. In the period September to December, out of 17 samples from the reservoir, 13 samples showed a faecal coli count of 250 to 1,700 per 100 mls. with total coli counts of 500 to 3,400. The highest count of 1,700 faecal and 3,400 total coli was obtained on 28th December, when a gale was blowing. Copper sulphate treatment was applied once during this period in an endeavour to reduce the coli count, but its effect was very transient on account of the pollution.

Chlorination, applied as chloramine, has been continuous at the rate of 0·4 p.p.m., except for a few days at 0.3 p.p.m. due to taste complaints.

Samples taken on supply may be divided into 2 sections,

1. those taken at a booster station, after some 2 hours contact with the chloramine and prior to distribution to the consumers, and
2. those taken from house taps.

The results have been as follows:—

	Total number of samples	Samples free from faecal coli	Samples with faecal coli present	
			No. of samples	No. per 100 mls.
1. *Booster station samples*				
January to August 24th	33	33	0	—
August 29th to December 28th	18	10	1	2
			3	3
			1	5
			1	7
			1	13
			1	90
			8	
2. *Samples from housetaps*				
January to August 24th	68	68	0	—
August 29th to December 28th	42	33	5	1
			1	2
			2	3
			1	25
			9	
Total	161	144	17	

The chlorine residuals found in the water at the booster station varied from 0·15 to 0·45, but most of the results were between 0·25 and 0·35 p.p.m.; the average was 0·29 p.p.m.

The 4 samples from the booster station with 5, 7, 13 and 90 faecal coli were taken during the months of October to December when the reservoir water had very high coliform counts. Residual chlorine in the water at this sampling point when the above samples were taken amounted to 0·22, 0·25, 0·25 and 0·17 p.p.m. Samples taken from house taps during the same weeks were free from or contained only 1 faecal coli per 100 mls. of water.

The samples taken from house taps show marked improvement on those taken from the booster station due to the extra contact time with the chloramine residual. The sample with 25 faecal coli, also containing 35 non-faecal coli, was actually due to disturbed conditions in a main caused by a reversal of water flow—4 other samples on the supply on that date were free from faecal coli, as was a repeat sample taken in the same street a few days later.

The pollution by gulls in the second half of the year has been very severe and it has been difficult to maintain a coli-free water on supply, although, except for 2 samples, the destruction of faecal coli by the chlorination treatment has been over 99 per cent. to 100 per cent. under all conditions.

NOTES:—

(*e*) Faecal coli were found only on 2 occasions, each sample containing 1 per 100 mls. of water and these were taken 6 weeks apart. Other samples on the supply on the same day were free from faecal coli.

The samples with non-faecal coli present were as follows:—

No. of samples	*Non-faecal coli present Number per* 100 *mls.*
8	1
3	2
2	3
1	13
1	25
1	160
16	

The samples with 13, 25 and 160 non-faecal coli present were all due to severe local disturbances of deposits in mains; the one with 160 present was due to a reversal of water flow.

These results were all due to 'aftergrowths' in deposits in mains and covered the period from June to November, as 11 other samples taken on the supply on these dates were free from coli.

(*f*) The 4 samples with faecal coli present contained 1, 2, 5 and 13 per 100 mls. of water. The last 3 samples, with 2 to 13 faecal coli, were taken on the 1 day and were caused by a disturbance of mains deposits. Repeat samples the following week were free from faecal coli.

The 6 samples with non-faecal coli present contained 1, 2, 3, 5, 5, and 13 per 100 mls. of water. Three of these results (with 2, 5 and 13 coli) represent the same 3 samples mentioned in the above paragraph. All results represent the result of 'aftergrowths' in deposits in mains.

GENERAL

Chlorination of the supplies has been maintained during the whole of the year. Flushing of the mains has been carried out as a general practice.

Aftergrowths of coliform bacteria in deposits in mains has again resulted in some samples of the distributed water containing coliform bacteria and on occasions, when these deposits have been disturbed, samples have given high coliform counts, but in either case the bulk of the bacteria found have been non-faecal types.

The general water supply has given the following results on distribution:—

Total number of samples	887	
Samples free from all coli in 100 mls.	770	86·8 per cent.
Samples free from faecal coli in 100 mls.	833	93·9 per cent.
Samples free from or containing only 1 faecal coli per 100 mls.	856	96·5 per cent.
Samples free from or containing not more than 2 faecal coli per 100 mls.	862	97·2 per cent.
Samples free from or containing not more than 3 faecal coli per 100 mls.	871	98·2 per cent.

The bacteriological quality of the distributed water supply has been maintained at a very satisfactory standard throughout the year despite the increased pollution of the large service reservoirs.

ADDITIONAL RESULTS

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
Service reservoirs						
Bowdon	22	9	11	1—90	13	1—90
Gorton upper	8	1	6	1—11	6	2—11
Gorton lower	9	0	4	2—8	8	2—160
Supplies						
Bowdon	103	82	11	1—25*a*	20	1—180 + *a*
Denton purification plant	12	12	0	—	0	—

NOTES:—

(*a*) The 11 samples with faecal coli were as follows:—

Samples	*Coli present No. per 100 mls.*
5	1
3	2
1	3
1	5
1	25
11	

The samples with 5 and 25 faecal coli per 100 mls. were due to disturbed conditions in mains, i.e. derived from disturbed deposits, as at the times the reservoir water contained only 1 and 0 faecal coli per 100 mls. prior to chlorination.

The non-faecal coli results were as follows:—

Samples	*Coli present No. per 100 mls.*
9	1
3	2
1	3
4	5
1	8
1	25
1	180+
20	

At least 3 of these results, those with 5, 25 and 180+ coli present, are due to disturbed deposits in mains.

All results are attributable to 'aftergrowths' in deposits in mains as 19 other samples taken on the same dates as those containing coli were excellent i.e. coli-free.

Comments of the Medical Officer of Health on the matter of quality

The Medical Officer of Health repeats the reservations made by him in his Annual Reports for 1953 and 1954. He appreciates nevertheless the infinite care exercised by the Engineer and Manager and his staff in combating the effects of the natural hazards.

FOOD SUPPLY

Since October 1939 food and drugs law has been contained in the Act of 1938 and the different amendments of the Acts of 1944 and 1950, together with many Orders, mainly concerned with the composition and labelling of food. Further, in this city, these measures are supplemented by Food Byelaws and various Corporation Acts which have additional provisions of proven worth in dealing with local conditions. In general, so far as the national code is concerned, a need for clarification, extension and consolidation has been recognised. This has culminated in the Food and Drugs (Amendment) Act, 1954, the operation of which however, apart from a section dealing with the closure of private slaughterhouses, is to await and coincide with that of a consolidating measure, the Food and Drugs Act, 1955, on the 1st January, 1956.

Hygiene

In the supervision of the hygiene of the preparation or handling of food in shops, restaurants, bakehouses, markets, factory canteens and warehouses, 2,513 inspections were made and at 130 premises lack of cleanliness or other unsatisfactory conditions were found. In one instance the dirty conditions of the equipment and premises were such as to warrant prosecution, and the occupier was fined two pounds on each of eight summonses. Apart from this occurrence the unsatisfactory conditions found at other premises were of a minor nature and were promptly remedied on cautions by the inspectors.

316 cases of food poisoning were investigated of which 125 individual cases were notified by medical practitioners. Of the remaining 191, 130 formed two main outbreaks of 100 and 30 cases respectively at canteens of public undertakings and in each of these outbreaks clostridium welchii was the responsible organism. In the larger outbreak the vehicle of infection was re-heated gravy, and in the other roast turkey.

There were 28 other outbreaks of a much smaller nature, mainly involving families, and in those cases, together with 68 individual cases, the causal organism most frequently was S. typhi-murium. In 10 family outbreaks however, and in 16 other individual cases the cause was not ascertained.

One of the family outbreaks of food poisoning involved a father and his two sons aged 11 and 12 years. The illness of the older boy caused the examination of a faecal specimen which revealed the presence of S. typhi-murium and this was thereupon notified to the department. Investigation then elicited that both his father and brother had also been ill but less severely, and with some reluctance they admitted having eaten duck eggs on the night before the onset of the illness. Their diffidence in making this admission was equalled only by their misgivings in explaining that they had collected the eggs from the nests of wild duck on an island in a public park. Bacteriological examination of duck eggs, shells and faeces, collected from the same nests, revealed that some of the faeces and egg shells were infected with S. typhi-murium of a similar type to that in the faeces of the notified case of food poisoning.

In another case a boy aged 9 years, with an acute illness, had been admitted to hospital, and a food poisoning organism, S. enteritidis, variety jena, isolated from him. Investigation of the circumstances at his home showed that he had a white mouse as a pet. Samples of its excreta and subsequently a post mortem examination of the mouse, revealed food poisoning organisms identical with those found in the boy, and although other members of the family had not had any illness the organism was also isolated from a faecal specimen from the mother. She had been caring for her son's pet whilst he was in hospital.

A summary of the details of all the food poisoning investigations is contained in the epidemiology section of the report.

The risk of food poisoning arising from the distribution throughout the country of considerable quantities of imported egg products, sampling of which had revealed salmonella organisms, necessitated extensive enquiries in the City as to the presence of such products, especially dried egg albumen. With the co-operation of the trade the dispatch of consignments or the use of stocks ceased pending the outcome of extensive sampling and bacteriological examinations by the Public Health Laboratory Service. The results were such as to preclude the release of any dried egg albumen other than for technical non-edible purposes. Work on the possibility of the heat treatment of this product on a commercial scale to render it safe for human consumption without damaging its natural properties is being undertaken by the trade.

The investigation of the incidence of salmonella in rodents as a possible source of food poisoning has been pursued and the Department continued to forward specimens taken at random for examination by the Public Health Laboratory Service and is indebted to Dr. M. T. Parker for the following statement and conclusion:—

Examination of rodents for salmonella. April, 1954–December, 1955

Source	Number examined	Salmonella positive number	Type of Salmonella			
			enteritidis		typhi-murium	other
			var danysz	var jena		
City						
Brown rats	378	14	5	2	4	dublin .. 1 meleagridis 1 florida .. 1
Black rats	3	0	—	—	—	
Mice	258	1	1	—	—	—
Port						
Dock premises—						
Brown rats ..	76	8	7	—	—	anatum .. 1
Black rats	55	0	—	—	—	—
Mice	15	0	—	—	—	—
Ships—						
Brown rats ..	0	0	—	—	—	—
Black rats	224	0	—	—	—	—
Mice	75	2	—	—	1	stanley .. 1
Total	1,084	25	13	2	5	5

Conclusion—

(1) In Manchester the house mouse did not appear to be commonly infected with salmonellae. The only salmonella isolated from a mouse in the City of Manchester was thought to have been derived from a bait laid by a firm of commercial rodent exterminators. The same type of salmonella (S. enteritidis var danysz) was isolated from a bait recovered from a nearby baker's shop.

(2) The brown rat was fairly commonly infected. The distribution of salmonella types is different from that in man, suggesting the infection of rodents from man via sewage is not important. S. enteritidis var danysz was the most commonly encountered type and there was evidence for the existence of foci infection in the rats of some localities. There was no evidence that this infection was associated with the use of bacterial rodenticides, or that mice became infected from rats.

(3) No salmonella infections of black rats were encountered.

The department's register of food hawkers and their storage premises has been reviewed. The lapse of time since the requirement as to registration under section 41 of the Manchester Corporation Act, 1946, is such, there was little doubt that the register included many persons no longer trading in the City. This was confirmed by an investigation which showed that the number of actual traders and premises had been reduced from 593 to 455 and from 144 to 125 respectively.

Amongst these traders there are 21 operating mobile canteens and 12 fish frying vans, and it is of some interest that the new Food Hygiene Regulations which became operative on the 1st January, 1956, contain provisions which in Manchester are already applicable to these vehicles by reason of the Corporation Act of 1946.

The department is also concerned with the registration of " street traders " not necessarily " food hawkers." Under section 61 of the Corporation Act of 1950, it is unlawful for any person to engage in street trading in the City unless he has been registered with the Corporation, and such registration may be refused or revoked if the Corporation consider a person to be unsuitable on account of misconduct or for any other sufficient reason.

Accordingly in the administration of these provisions the department has had to have regard to the behaviour of street traders such as may be revealed by proceedings instituted by the Watch Committee on contraventions of the Weights and Measures Act or Traffic Control Regulations restricting the use of streets for trading. It was necessary to issue cautions to 31 traders who persistently carried on their business in prohibited streets or caused obstructions, and in five instances revocation of their registration was decided but awaits the outcome of appeals made by the traders to the Magistrates' Court.

Milk and ice cream control

Measures to check the hygienic quality of the City's milk supply were maintained by the regular inspection of dairies, their equipment and methods of milk treatment and distribution. The routine sampling of milk for bacteriological purity and chemical analysis was continued throughout the year. Similar control was exercised in respect of the preparation and sale of ice cream.

City dairies

3,007 visits were made to dairies and milk depots during the year where it was found that generally the standard of cleanliness was at a high level. In no instance was it necessary to institute legal proceedings in respect of contraventions of the Milk & Dairies Regulations.

The testing of the 13 pasteurizing and 6 sterilizing plants at the dairies licensed for these purposes have been carried out at least once monthly by the Milk Control Inspectors irrespective of more routine visits. The efficiency of these plants is reflected in the high percentage (99·6) of satisfactory results obtained on samples of the processed milk taken at the dairies and on the road whilst the milk was in course of delivery to hospitals, schools and the general consumer. 725 such samples were taken of which only 3 (0·4 per cent.) failed to pass the prescribed tests laid down by the Ministry, viz.,—the phosphatase test for efficiency of heat treatment and the ½-hr. methylene blue test for keepin quality. Subsequent samples from the plants concerned were satisfactory.

Milk supply to hospitals, schools and day nurseries

Pasteurized milk supplied to various hospitals, schools and day nurseries in the City has been strictly supervised and regularly sampled. The results o the examinations have shown that a uniform high standard of quality and cleanliness has been maintained and on no occasion was the milk found t contain tubercle bacilli.

The raw milk supplied to the Langho Epileptic Colony and Booth Hal Hospital from the attested herds at the Langho Colony farms has been frequentl sampled both at the farms and on arrival at Booth Hall Hospital. The results o the examinations have shown a high standard of quality and cleanliness and i no case has there been tuberculous infection of the milk.

City and " outside the City " milk producers

5 samples of raw milk from milk producers within the City and 45 sample from outside producers were examined by the biological test for tubercl bacilli. 1 of the samples from a producer within the City proved positive. Th Ministry of Agriculture and Fisheries were notified of this positive result wit a request that a veterinary inspection be carried out at the farm concerned As a result 1 cow suffering from tuberculosis of the udder was discovered an slaughtered under the Tuberculosis Order 1938. All the samples taken fro producers outside the City proved negative, which may be accounted for by th majority of these samples being of milk from tuberculin tested herds.

Four local authorities adjoining the City after taking appropriate action unde the Tuberculosis Order, notified the department that 49 samples of the mil taken by their inspectors from farmers in their area and who were sending al their milk into Manchester dairies, had been found to contain tubercle bacilli Investigation elicited that the milk in question was being received at pasteurizin establishments in the City and processed before delivery to the consumer.

Very few complaints about milk were made to the department during the yea and it is remarkable that in spite of the prolonged warm weather no complaint were received concerning the keeping quality of milk distributed in the City the total of which is estimated to be not less than 3,000,000 gallons annuall

Some complaints related to the condition of bottles and although mil distributors are legally required to ensure that all vessels and bottles are clea before use, misuse by customers does not help the distributors to maintain tha necessary cleanliness. Carelessness by some consumers in failing to rins bottles promptly after emptying is to be deprecated. Sour milk deposits in suc bottles attract vermin and insects. The fruit fly (Drosophilla buskii) will bree in milk residues and the pupal cases of the larvae, resembling seed husks, ca become so adherent as to resist the bottle washing at the dairies.

No milk was implicated with any cases of infectious disease.

Ice cream

The number of premises newly registered for the manufacture and/or sale of ice cream during the year was 274 as against 89 in 1954, bringing the total number of such premises now on the register to 2,074. Registrations for the sale of ice cream during the past two or three years have been mainly of premises equipped with totally enclosed, automatic, cabinet refrigerators and selling this commodity in sealed packets only. Shops no longer use the open ice tub.

Regular visits of inspection made to ice cream premises have found the general standard of cleanliness to be good and in no instance was it necessary to institute legal proceedings in respect of dirty premises or equipment.

53 samples of ice cream were taken during the year for bacteriological examination. 36 (67·9 per cent.) were placed in Grades 1 and 2 and were, therefore, satisfactory. 10 (18·9 per cent.) came in Grade 3 which is fairly satisfactory, whilst 7 (13·2 per cent.) fell into the lowest grade (Grade 4). Thorough investigation was made at the factories from which the Grades 3 and 4 samples came and repeat samples of the ice cream taken until Grade 1 results were obtained in each case.

TABLE I.

Milk (Special Designation) Regulations, 1949

LICENCES ISSUED DURING THE YEAR

Dealer's licence to use the designation:	
"Pasteurized"—	
(A) Pasteurizing establishments	13
(B) Other dairies and bottled milk shops	1,642
"Sterilized"—	
(A) Sterilizing establishments	6
(B) Other dairies and bottled milk shops	2,078
"Tuberculin tested"—	
Dairies and bottled milk shops	542
Supplementary licences to use the designation:	
Pasteurized	30
Sterilized	32
Tuberculin tested	14

Table II.

Bacteriological and biological examination of pasteurized and sterilized milks

Place of collection of sample	Bacteriological, etc., Examination *					Biological examination for presence of tubercle bacilli				
	No. of samples examined	Satisfactory		Unsatisfactory		No. of samples examined	Positive		Negative	
		No.	Percentage	No.	Percentage		No.	Percentage	No.	Percentage
Pasteurizing plant at dairy..	123	123	100·0	—	—	1	—	—	1	100·0
Hospitals	118	116	98·3	2	1·7	116	—	—	116	100·0
Schools and day nurseries ..	130	129	99·2	1	0·8	135	—	—	135	100·0
On road during distribution.	354	354	100·0	—	—	1	—	—	1	100·0
Totals	725	722	99·6	3	0·4	253	—	—	253	100·0

In addition to the above samples, 278 samples of milk were taken at hospitals, schools and day nurseries in the City and submitted for chemical analyses. The results of the analyses showed that 274 of the samples came up to the legal standard—the remaining 4 samples were found to be slightly deficient in fat content. Cautionary letters were sent to the firms responsible.

* Official Test : (1) Pasteurised and Tuberculin Tested (Pasteurized) Milk to pass the Phosphatase and ½ hour Methylene Blue tests.
(2) Sterilised and Tuberculin Tested (Sterilized) Milk to pass the Turbidity test.

Food and drugs adulteration

The sampling of food and drugs and the administrative duties to prevent he adulteration or other deviation from the provisions of the Food and Drugs Act and Regulations, continued to be so organized as to maintain a close crutiny of the range of food and drugs customarily purchased by a family. Most of the samples were obtained at consumer level for submission to the Public Analyst.

The total number of samples (2,793) was less than in the previous year 3,303) and the percentage (5·4) failing to satisfy legal requirements was also ess. 1,072 samples of milk were obtained, including 31 " appeal to cow " amples, whilst 278 informal samples were submitted by the milk control nspectors. 293 of the milk samples were purchased from retailers and only ne was found to contain added water, to the extent of 2·0 per cent. The airy company was cautioned.

An opened bottle of milk received from a householder and submitted or analysis proved to be 43 per cent. deficient in fat and 14 per cent. deficient n non-fatty solids. Detailed investigation at the dairy, however, failed to licit any evidence to account for the single occurrence and further samples btained by the sampling officers were found to be genuine.

747 samples of milk were taken from farmers' consignments on arrival at airies in the City, and of these 128 (17 per cent.) proved on analysis to be elow the prescribed standard. 38 of these samples were deficient in fat but as he average fat of the respective consignments of which they formed part xceeded the standard prescribed by the Sale of Milk Regulations 1939, no ction was taken.

Cautions were sent to 15 farmers in respect of 35 samples which were elow the standards prescribed in the Regulations, and legal proceedings were nstituted against 6 farmers in respect of 15 samples found to be substantially dulterated. Proceedings are pending in connection with a further 3 samples. ines and costs totalled £53 5s. Concerning the remainder of the unsatisfactory mples (37), the extent of the deviations from the prescribed standards were ight and further sampling of consignments from the same sources proved to e satisfactory.

1,721 samples of food (other than milk) and drugs were purchased or taken nd submitted to the Public Analyst: of these 1,049 were formal samples and 72 were informal.

regularities

Apart from irregularities in respect of milk, unsatisfactory samples were ealt with as follows:—

Four samples of pickles and one sample of fruit juice contravened the abelling of Food Order, 1953, i.e. the ingredients were not stated on the label orrectly or were not in the quantitative order. The manufacturers were utioned and the commodities re-labelled.

The label on a formal sample of a wine cocktail declared the proof spirit be 35° but on analysis proved to be 32·5°. The wholesaler was cautioned d all stocks withdrawn from sale.

A sample of infants' cordial was not labelled in accordance with the requirements of the Pharmacy and Medicines Act, 1941. The chemist was cautioned and re-labelled the commodity.

A formal sample of teething powder was found to contain mercurous chloride; the manufacturer withdrew from sale all stocks of these powders.

A sample of potted meat was certified by the Public Analyst to be a meat paste and as such complied with the Food Standards (Meat Paste) Order, 1951. A cautionary letter was sent to the manufacturer following which the correct description was applied.

The toffee coating of a sample of sugar confectionery (buttered fruits) contained only 3·6 per centum of fat of which less than half was butter fat. The manufacturer was cautioned and existing stocks withdrawn from sale.

There was one minor contravention of the Public Health (Preservative in Food Regulations), 1925/1953, relating to a sample of beef sausage in which the presence of preservative was not declared; the retailer was cautioned.

A number of private samples of food containing extraneous matter, e.g. brush bristles, oil deposits, insects, etc., were submitted by members of the public and as a result the circumstances of sale, packaging and manufacture were investigated. In each instance it could not reasonably be deemed that gross negligence had occurred, but the particular companies were cautioned on the need to exercise greater care in preventing the addition of such adventitious matter. In no instance was a company involved with more than one occurrence.

Sausage

Although quantitative standards of pork and beef to be contained in sausages are not prescribed by law, 20 samples were examined. They were found to be satisfactory in so far as the quantity of meat present approximated to the amounts prescribed by former legal standards, and could be considered reasonable.

Public Health Condensed Milk Regulations, 1923–1953.

Public Health Dried Milk Regulations, 1923–1948

41 samples of condensed and dried milks were submitted to the Public Analyst for examination and the quality and labelling requirements were found to satisfy the Regulations.

Butter and margarine factories and wholesale premises

The number of registered premises is 103 and inspections made of each establishment found that the requirements of the Department were satisfied in respect of the absence of adulterants and the structural arrangements in premises where both butter and margarine are stored.

Food Standards (Ice Cream) Order, 1953

9 samples of ice cream submitted for analysis complied with the prescribed standards.

The samples of foods and drugs which failed to meet the requirements of the Acts, Regulations and Orders are detailed in the following tabular statement:—

Adulterated and other unsatisfactory samples and action taken

Private and informal samples				Article	Formal samples							
								Legal proceedings				
Adulterated or unsatisfactory	Cautioned	Formal samples unobtainable	Referred for action to other local authority		Adulterated or unsatisfactory	Cautioned	Further samples taken and found satisfactory	Summonses	Pending	Fined	Amount of fines	Amount of costs
											£ s. d.	£ s. d.
46	*	—	—	Milk	84	66†	—	15	3	15	37 0 0	16 5 0
—	—	—	—	Barley	2	2	—	—	—	—	—	—
3	2	—	1	Bread	—	—	—	—	—	—	—	—
—	—	—	—	Dried Fruit	1	—	1	—	—	—	—	—
—	—	—	—	Fruit juice	1	1	—	—	—	—	—	—
1	1	—	—	Infants' cordial	—	—	—	—	—	—	—	—
1	1	—	—	Meat pie	—	—	—	—	—	—	—	—
1	1	—	—	Pickles	3	3	—	—	—	—	—	—
—	—	—	—	Potted meat	1	1	—	—	—	—	—	—
—	—	—	—	Sausage	1	1	—	—	—	—	—	—
3	3	—	—	Soft drink	—	—	—	—	—	—	—	—
1	—	1	1	Sugar confectionery	1	1	—	—	—	—	—	—
—	—	—	—	Teething powders	1	1	—	—	—	—	—	—
—	—	—	—	Wine cocktail	1	1	—	—	—	—	—	—

* Followed by formal samples where necessary.

† Cautioned or further samples taken.

REPORT FROM MARKETS DEPARTMENT ON SUPERVISION OF MEAT AND OTHER FOODS

The Medical Officer of Health is indebted to the General Manager of the Markets Department for the following particulars relating to the operations of the Department during the year ended 31st March, 1955.

The numbers of animals slaughtered at the City Abattoir during certain years are shown in Table A; Table B shows the total condemnations in the City; and Table C the total weight of meat condemned at the City Abattoir and Wholesale Meat Market.

The bulk of the meat, fish and fruit which is condemned is found to be unfit for food on arrival at the markets, railway stations, and wholesale houses. An efficient system of inspection at the centre of distribution lessens the risk of diseased meat, etc., being exposed for sale in retail shops.

The staff establishment for inspectors comprises 1 chief veterinary inspector, 3 assistant veterinary inspectors and 10 meat, fish, etc., inspectors.

TABLE A

Animals slaughtered at the City Abattoir during certain years

Year ended 31st March	Cattle	Sheep and lambs	Calves	Pigs	Goats
1946	61,387	168,152	34,881	1,705	—
1947	64,061	233,675	46,701	1,385	—
1948	75,051	179,350	34,246	752	—
1949	58,645	208,725	39,447	2,659	1,223
1950	72,449	209,048	44,170	3,058	2,674
1951	80,852	216,399	52,259	6,403	4,273
1952	97,467	194,143	44,755	7,718	3,780
1953	68,400	232,182	31,720	17,466	909
1954	65,303	230,662	27,425	31,978	6
1955	75,278	358,426	25,642	48,034	—

TABLE B

Total condemnation of various foodstuffs during 1946-55

Kind of food	1946	1947	1948	1949	1950	1951	1952	1953	1954	**1955**
Meat (tons)	774¼	821	852½	808	978	954¾	1,113½	775	690	514¼
Fish (tons)	168½	190	387¼	284	316¾	160	79¼	57½	55¾	44½
Fruit (tons)	10¼	26½	144½	80	136	83¾	91½	81	57¾	64¼
Vegetables (tons) . .	206	127	326½	131¾	162½	109½	61	23	94½	61¾
Eggs (number) . .	718	384	946	40	640	1,614	900	2,198	4,844	2,552
Game (head) . .	1,079	223	156	524	1,835	675	184	658	704	1,213
Poultry (head) . .	3,855	5,129	2,812	6,465	15,043	7,419	5,048	4,130	6,712	5,923
Rabbits (head) . .	1,079	3,363	2,217	1,731	11,040	12,610	17,372	9,587	9,925	3,967

TABLE C

Meat condemned at the City Abattoir and Wholesale Meat Market

Particulars	Year ended 31st March, 1954	**Year ended 31st March, 1955**
Total weight of meat condemned at the City Abattoir and Wholesale Meat Market	Tons 662¼	Tons 490
Of which the weight of dressed meat consigned from places other than the city was	23	18
Included in which were imported offals amounting to . .	547 lbs.	274 lbs.

Unwholesome food condemned

Kind of food	Year ended	
	31st March, 1954	**31st March, 1955**
MEAT :—	lbs.	lbs.
Beef	1,384,730	1,025,125
Mutton	18,136	15,498
Veal	23,081	9,334
Horseflesh	—	—
Pork	118,826	101,638
Reindeer	—	—
Whalemeat	—	—
Venison	298	28
Imported offal	547	274
Goatflesh	—	—
	1,545,618 = 690 tons	1,151,897 = 514¼ tons
FISH :—	lbs.	lbs.
Fish	119,747	89,504
Shellfish	5,024	9.976
	124,771 = 55¾ tons	99,480 = 44½ tons
	head	head
GAME	704	1,213
POULTRY	6,712	5,923
RABBITS	9,925	3,967
FRUIT	lbs. 129,542 = 57¾ tons	lbs. 144,062 = 64¼ tons
VEGETABLES	211,714 = 94½ tons	138,040 = 61¾ tons
MISCELLANEOUS :—		
Eggs	No. 4,844	No. 2,552
Evaporated, condensed and other canned milks	lbs. 10,301	lbs. 6,430
Sundry provisions	71,806	60,777 = 27¼ tons

Approximately 728 tons of unwholesome food were condemned under all headings by the inspectors of the Markets Department during the year ended 31st March, 1955. With the exception of 12½ tons, this total comprised the aggregate condemnations arising from routine duty examinations.

The 12½ tons condemned arose out of 145 special inspections involving 84½ tons of foodstuffs, classified as follows:—

	Tons
Found to be fit for retail trade	57¾
Found usable for manufacturing for human food	1½
Found usable for animal feeding stuffs	¾
Found usable for commercial or industrial purposes	12
Condemned as unfit for any purpose	12½
	84½

Condemned food is handed over to the Cleansing Department of the Corporation for processing for commercial or industrial purposes, or for destruction by fire. A small portion of the total condemned as unfit for human consumption is found usable for animal feeding stuffs and for commercial and industrial purposes.

With the exception of the following, which were seized while deposited or exposed for sale, the quantities given in the preceding tables were surrendered after being condemned by inspectors of the Department:—

Kind of food	Year ended	
	31st March, 1954	**31st March, 1955**
Bread	Nil	lbs. 2¼
Poultry	Head 1	Head Nil
Fish	lbs. 69½	lbs. 1½
Shellfish	Nil	4
Meat Pies	Nil	½

NOTE.—The term "surrendered" includes cases in which inspectors have discovered unwholesome food in the course of their duty, but in which, owing to the salesman's acceptance of the inspector's decision, it has been deemed unnecessary to obtain a magistrate's order prior to destruction.

Carcases inspected and condemned—year ended December, 1955

	Cattle excluding cows	Cows	Calves	Sheep and lambs	Pigs
Number killed and inspected—					
At the City Abattoir	41,560	29,492	21,221	366,735	50,129
Brought into the City after killing and inspected	15,545		10,072	43,624	43,389
All diseases except tuberculosis—					
Whole carcases condemned:—					
At the City Abattoir	68		79	261	147
Brought into the City after killing	38		17	27	29
Carcases of which some part or organ was condemned:—					
At the City Abattoir	3,178		11	524	2,680
Brought into the City after killing	183*		—	42*	67*
Percentage of the number inspected affected with disease other than tuberculosis:—					
At the City Abattoir	4.6		0.4	0.2	5.6
Brought into the City after killing	1.4*		0·2	0.2*	0.2*
Tuberculosis only—					
Whole carcases condemned:—					
At the City Abattoir	73	530	14	—	31
Brought into the City after killing	2		1	—	Nil
Carcases of which some part or organ was condemned:—					
At the City Abattoir	603	4,290	2	—	1,312
Brought into the City after killing	28		—	—	16
Percentage of the number inspected affected with tuberculosis:—					
At the City Abattoir	1.6	16.4	0.1	—	2.7
Brought into the City after killing	0.2		Negligible	—	Negligible

* Includes condemnations due to decomposition which accounts for a part of the percentages.

Note.—The bulk of carcases brought into the City continued to be inspected at the place of slaughter and certificates of inspection were received in respect of them. There is no meat marking scheme under Part III of the Public Health (Meat) Regulations, 1924, in force in the City.

SMOKE PREVENTION

In July, following the withdrawal of Mr. Gerald Nabarro's private member's Clean Air Bill, the Government introduced its Bill to implement the recommendations of the Beaver Committee on Air Pollution. Whilst the draft is certainly the first comprehensive measure to offer a prospect of combating smoke pollution from both industrial and domestic sources, some details of its provisions do warrant and are receiving critical examination with a view to strengthening the proposals by amendments based especially on the practical experience of existing measures under general and local Acts, such as the Manchester Corporation Acts, 1946 and 1950. Thus, concern is particularly aroused by the scope of defences prescribed in respect of dark smoke emissions; the length of seven years within which further defences would be available; the adequacy of measures to prevent grit emissions and implications of specific recognition of smoke emissions in " smoke control areas." The significance of central as distinct from local authority control of certain smoke emissions from alkali, etc., works and other " special cases " has also presented a controversial issue.

In conformity with the declared policy of the Corporation, the initial " central smokeless area " of the City has been extended to three contiguous areas so that the total area of the central smokeless zone now comprises 412 acres. In addition, all future redevelopment areas will be declared to be smokeless zones so as to prevent the emission of smoke from any of the buildings in the redeveloped areas. A separate section of this report is devoted to a more detailed description of five such areas which have been declared to be smokeless zones.

A national fuel efficiency exhibition was held at the City Exhibition Hall in October. This exhibition dealt mainly with the use of industrial fuel and was the largest exhibition of its type held in the Provinces, attracting industrialists, technicians and students from a wide area. Through the courtesy of Provincial Exhibitions Ltd., the Department was provided with free space, to illustrate some of its smoke prevention activities and results. The North Western Gas Board and the North Western Electricity Board collaborated with exhibits suitable for use in the domestic and commercial spheres.

Although special classes in boiler-house practice have been continued for many years at the Manchester Municipal College of Technology, the principal cause of excessive smoke emission continues to be due to unskilled firing. This may be due to the present state of the labour market, where vacancies for what may be considered less arduous work attract those who find little inducement to continue in a less congenial employment. In other cases employees may be indifferent to either fuel economy or smoke abatement, possibly because there may be little financial incentive for them to be otherwise.

This apathy presents a serious problem because, whilst the threat of legal proceedings may secure observance of smoke abatement legislation during daylight, bad firing can cause gross pollution during the night without risk of action. The provision of smoke recorders and alarms to suitable plant, although not infallible, could counteract such an attitude and legislation for that purpose is warranted. Clearly, ultimately there should be compulsory registration and certification of personnel in charge of boiler plant, so that only those who displayed reasonable competence could be employed. This would tend to raise the standard of labour and attract to this work skilled men having a pride in an enhanced status.

So far as the principle of financial recognition of competency is concerned, the City Council's acceptance of the Health Committee's recommendation on the payment of bonuses to stokers employed by the Corporation affirms the value of precept and example. Those who obtain the Boiler Operator's Certificate of the City and Guilds of London Institute now receive an additional twopence per hour on their standard rate of wages, with an additional penny for the Intermediate Certificate and a similar bonus for the Final grade.

The policy of the Department has been to encourage the installation of mechanical means of firing and thereby to eliminate the intermittent smoke emissions which may occur every time a furnace is fired by hand. In addition, much arduous work can be avoided by mechanical firing, thus encouraging the employment of more skilled personnel who might otherwise be discouraged by the laborious nature of the work. Although mechanical stoking is so advocated, it is recognized that the provision of an unsuitable type of mechanical stoker can increase rather than diminish a smoke or grit nuisance. Thus considerable care and tact is necessary in advising industrialists on the selection of appliances suitable for present or future conditions. The advice is not always accepted, but every effort is made to secure the most efficient use of all apparatus.

The provision of mechanical stoking also may involve the reconstruction of flues and the provision of mechanical draught. Where mechanical firing is being considered mainly as an aid to increased steam production, attention must also be directed to the possibility of nuisances from grit emission arising from an increased rate of combustion, the particular method of mechanical firing and the type of fuel used.

Additional automatic smoke alarms have been installed at three premises following advice from the inspectors, who have consistently advocated the instalment of this type of equipment, not only to give warning to the staff, but to maintain a smoke conscious attitude on all engaged on the boiler plant.

In response to national demands for fuel economy, a firm of timber merchants incinerated all wood waste and recovered the waste heat by passing the combustion gases through two Lancashire boilers. The high draught required, and the light nature both of the fuel and ash, caused a periodic dust and ash nuisance in the vicinity of the works. This nuisance has now been remedied by the provision of a high efficiency grit and dust arrestor.

Minor contributions to a cleaner air policy are continually taking place, such as the use of smokeless fuel in lieu of coal in smaller appliances, even though coal had always been the customary fuel. In this regard, particular mention may be made concerning the substitution of coke for coal in the work's locomotive and ' grab ' boilers at the Rochdale Road Depot of the North Western Gas Board and the installation of a gas-fired singeing machine at a textile mill, following official advice from the Department.

Due to greater industrial activity and the effect of increased mechanization at the colliery on the grade of coal supplied, grit emissions continue to occur. Where these emissions are of a sporadic nature, a great amount of time is frequently taken up before the inspectors are able to obtain direct evidence as to the source and cause of the trouble. In one case, following successful legal action for smoke nuisance, this nuisance was eliminated, only to be succeeded by a serious grit nuisance which occurred during the hours of darkness. It would appear that the firm in question used their best fuel for lighter steam loads during daylight, whilst the worst fuel and heavier load was taken during the night, when observations against smoke nuisance were not practicable. The increased load along with the greater amount of 'fines' in the fuel, led to a serious grit nuisance. Fortunately, the extensive nature of the deposit directed attention to the only source from which such a nuisance could arise. Suitable action was taken, and the nuisance ceased. In previous remarks concerning the Clean Air Bill, mention was made of grit and dust arrestment, and clearly powers should be given to a local authority to require grit and dust arrestment on all new boiler plant and also facilities to allow the sampling of flue gases and deposits in flues in order to determine whether undue grit and dust are being emitted.

The following statement relates to the work of the smoke inspectors under the provisions of the Public Health Act, 1936:—

Timed observations taken	679
Black smoke, two minutes and over in half-hour periods	46
Smoke other than black and causing nuisance	15
Black smoke under two minutes	346
Dense smoke other than black not in such quantity as to be a nuisance	13
Total amount of black smoke observed in minutes	507¼
Average amount of black smoke observed (in minutes) per observation revealing black smoke	1·29
Total amount of dense smoke other than black, in minutes	333
Average amount of dense smoke other than black observed (in minutes) per observation revealing dense smoke other than black	11·89
Complaints from all sources	197
Visits to works *re* smoke abatement	2,452
Premises where inspectors recommended plant to be altered, improved or repaired	59
Premises where plant was found to have been altered, etc., as a result of inspector's recommendation	43
Cases reported to Committee	61
Cases cautioned or excused	12
Statutory notices served—black smoke	18
Statutory notices served—other than black	12
Prosecutions for smoke nuisances, penalties imposed	11
Magistrates Orders granted—black smoke	5
Magistrates Orders granted—other than black	3
Amount of penalties and costs	£51 16s. 6d.
Statutory notices expiring without further action	39
Approximate number of industrial chimneys—including "exempted" chimneys	1,659

Cases reported to Committee—causes of emission:—

Bad firing	40
Unskilled firemen	4
Breakdown in plant	3
Plant overloaded	3
Unsuitable fuel	3
Unsuitable plant	2
Bad firing and defects in plant	2
Excessive rate of combustion	2
Unskilled firemen and defect in plant	2

Prior approval of the installation of furnaces

Existing national legislation referring to smoke nuisances is contained within the Public Health Act, 1936. This Act does not attempt to deal with atmospheric pollution as such, but only with smoke emissions deemed to cause a nuisance. So far as this Act is concerned, no legal control can be applied to prevent the installation of new plant which in operation might cause unnecessary emissions of smoke, even to the extent of a nuisance, action being available only after the nuisance has arisen. Further, in the case of smoke which is not black but which is considered to be causing a nuisance, a valid defence is that the best practicable means of prevention are being taken, having regard to cost and other circumstances. Thus, with a plant already installed, the defence of " best practicable means " could present a serious obstacle to the removal of a recurrent smoke nuisance.

For many years local legislation in the United States has enabled a large measure of control to be exercised over both new and existing fuel-burning installations, and it was obvious that such control over new furnaces would have a cumulative effect in preventing the continuation of unsatisfactory installations causing either unnecessary or excessive smoke emissions along with periodic legal action when such nuisances were detected. Correspondingly in the post-war period, Manchester has pioneered legislation in this country in an endeavour to ensure that at least all new furnace installations should be smokeless as far as is practicable. These powers were obtained under Section 36, Manchester Corporation Act, 1946, as follows:—

> (1) No person shall install in any building whether erected before or after the passing of this Act, any furnace for steam raising or for any manufacturing or trade purpose unless such furnace is so far as practicable capable of being operated continuously without emitting smoke.
>
> (2) Any person who contravenes the provisions of this Section shall be liable to a penalty not exceeding 10 pounds and to a daily penalty not exceeding two pounds.
>
> (3) If a person before installing in a building a furnace to which this Section applies, submits to the Corporation plans, proposals and particulars of the proposed furnace and furnishes them with such other necessary information in regard thereto as they may require, the Corporation shall within a period of six weeks from the date upon which such plans, proposals, particulars and information are received by them, serve a notice upon such person stating whether or not they are satisfied that the furnace is so far as practicable, capable of being operated continuously without emitting smoke, and if they are so satisfied or if they do not serve a notice upon such person before the expiration of the said period of six weeks no proceedings shall be taken against him under this Section in respect of the installation of that furnace in accordance with the plans, proposals, particulars and information so submitted and furnished.
>
> (4) In determining for the purposes of this Section whether a furnace is so far as practicable capable of being operated continuously without emitting smoke, the Corporation or a court shall if either of the parties so desire have regard to cost and to local conditions and circumstances.

This Section was amended by Section 42, Manchester Corporation Act, 950:—

1. Section 36 (Prevention of smoke from industrial furnaces) of the Manchester Corporation Act, 1946, shall have effect by the substitution for subsections (1) and (2) thereof of the following subsections:—

(1) No person shall install in any building whether erected before or after the passing of this Act or on any premises any furnace unless such furnace is so far as practicable capable of being operated continuously without emitting smoke;

(2) Any person who contravenes the provisions of this Section shall be liable to a penalty not exceeding ten pounds and any person who after there has been a conviction of an offence of installing a furnace in contravention of those provisions uses that furnace shall unless it has been altered so as to comply with those provisions, be liable to a penalty not exceeding two pounds for each day on which he so uses the furnace;

Provided that a person so using such furnace shall not be liable to the last-mentioned penalty unless he himself was convicted of the said offence or if he was not so convicted unless prior to such use or the continuance of the use he had received notice from the Corporation that there had been a conviction in respect of the installation of such furnace.

2. Nothing in this Section or in the said Section 36 shall apply to the installation of a furnace in—

(*a*) a house or flat unless the furnace is intended to be used for the heating of more than one house or flat; or

(*b*) a building previously used as a single house which has been converted into two or more separate houses or flats.

3. For the purposes of this Section the expression " house " shall include a house of which part is licensed by the justice for the sale of intoxicating liquor pursuant to the Licensing Acts, 1910 to 1949, notwithstanding that the premises are so licensed provided that the house is not designed and is not being adapted to provide more than three bedrooms for visitors or guests.

4. Before the Corporation serve a notice under Subsection (3) of the said Section 36 as amended by this Section stating that they are not satisfied that a furnace is so far as practicable capable of being operated continuously without emitting smoke, the Corporation shall consult with the Minister of Fuel and Power.

It will be realised that the effect of the amendment has been to give a greater measure of control over new installations, whether for steam raising or not. At the same time, notification of the installation of new furnaces is not compulsory and vigilance is required to ensure that the Acts are complied with. n practice, the Department becomes aware of proposed schemes when plans re submitted to the City Architect in which boilers, flues or chimneys are ndicated. It is possible, however, that no structural work requiring building byelaw approval is involved for the installation of a new furnace, and consequently no plan might be submitted. Fortunately, the frequent visits of the moke inspectors to fuel-burning installations minimize the risk of unsatisfactory schemes being undertaken and thus assist the prevention of infringements.

Eight schemes were formally approved during the year, and related principally to mechanical firing of Lancashire boilers, a self-contained oil-fired shell-boiler installation, and a large oil-fired water-tube boiler plant.

Towards the end of the year a new large-scale water-tube boiler plant came into operation, having been under construction for nearly three years. The three boilers are fired by chain-grate stokers, utilizing a low grade of coal, and are each capable of an evaporation of 75,000 pounds of steam per hour at 625 pounds pressure per square inch. The plant is provided with high efficiency grit and dust arrestors. The coming into service of this plant has already enabled the management to close down a range of Lancashire boilers which were unsuitable for the efficient utilization of the only grade of coal which could be supplied.

Smokeless zones

Manchester Corporation Act, 1946, *Section* 35

The Corporation were empowered by the above Section to declare the central area of the City to be a smokeless zone and to declare other areas to be smokeless zones, subject to the approval of the Minister of Housing and Local Government.

Due to post-war circumstances, the establishment of the central smokeless zone was delayed until May 1st, 1952. The success of this new method of smoke **prevention** contrasted greatly with the erstwhile principle of smoke **abatement**, and the visible results immediately secured whole-hearted co-operation from the public towards this approach to clean air. Contiguous areas were surveyed and approved so that at present the central smokeless zone extends over 412 acres.

In addition, the policy of the Corporation is to establish smokeless zones in all future clearance areas so that as they are redeveloped for residential purposes, domestic smoke will be eliminated, thus enhancing environmental conditions by obtaining cleaner air and a higher standard of domestic heating. The following areas were declared to be smokeless zones as from the 1st August, 1955 :—

1. Area contained within Holland Street, Cuthbert Street, George Street, Shooter Street, to the rear of, and including the property numbered 17, Collinge Street, Whitby Street, Ridgway Street, Butler Street.

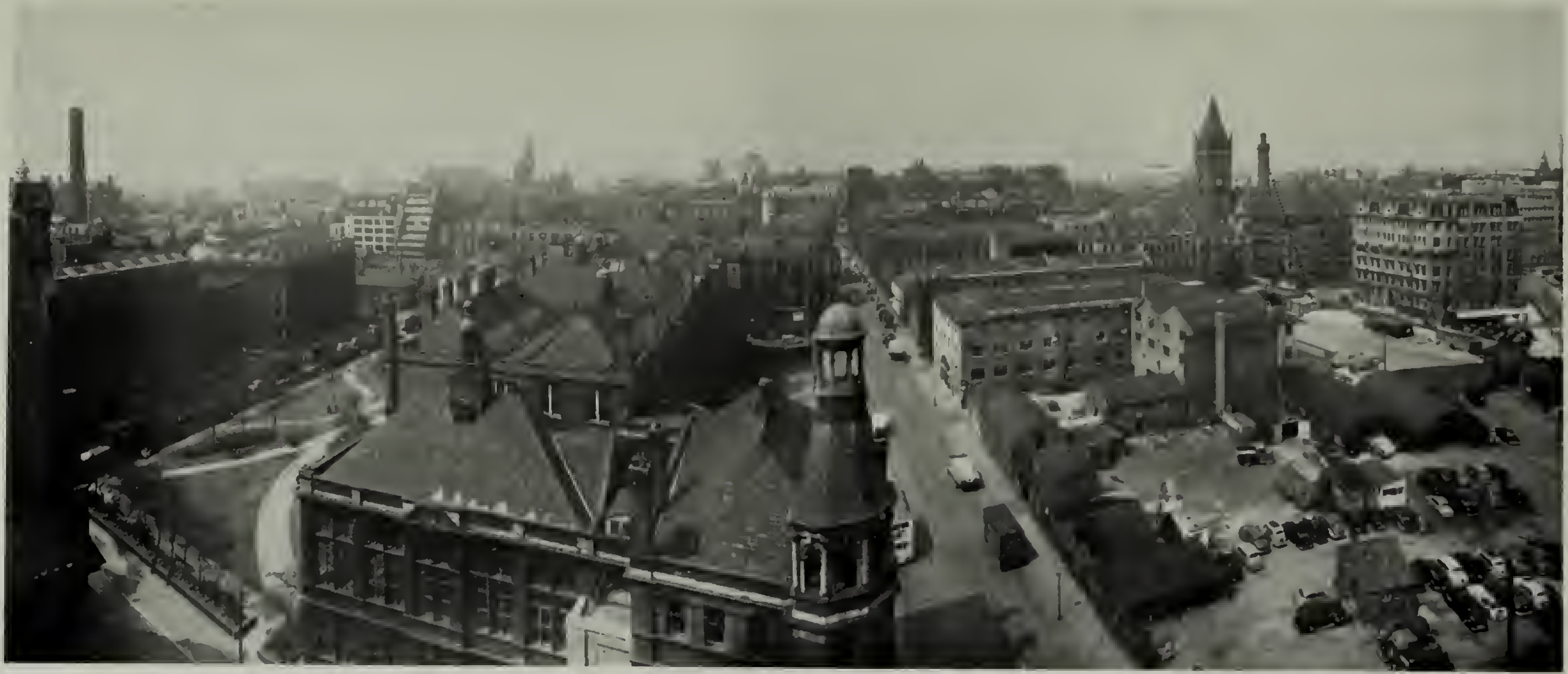
   This area comprises 19·3 acres of land on which, on the 1st November, 1954, there were situated 202 dwelling houses, 195 of which are the subject of the City of Manchester (Ridgway Street, Ancoats) Housing Compulsory Purchase Order, 1953, together with 14 properties used industrially and commercially. The remaining 7 houses are contained in a small area of 0·8 of an acre abutting the main site, and are to be the subject of separate compulsory purchase. All the buildings within the prescribed area are to be demolished and the area developed for residential purposes including some shops with living accommodation.

2. Area contained within Tipping Street, Ardwick (corner of Thomas Street), Chapel Street, passage at rear of 146 to 152, Tipping Street, Boden Street, Green Place to Paddock Street, behind the Corporation flats in Brydon Avenue to Green Street, Green Street, the side external wall of No. 7, Green Street, Green Avenue, passage at rear of premises in Ardwick Green North to Chapel Street, Chapel Street, Paddock Street, Thomas Street, Nicholson Square, boundary of the rear curtilage of the premises in Manor Street, Paddock Street and Thomas Street to Tipping Street.

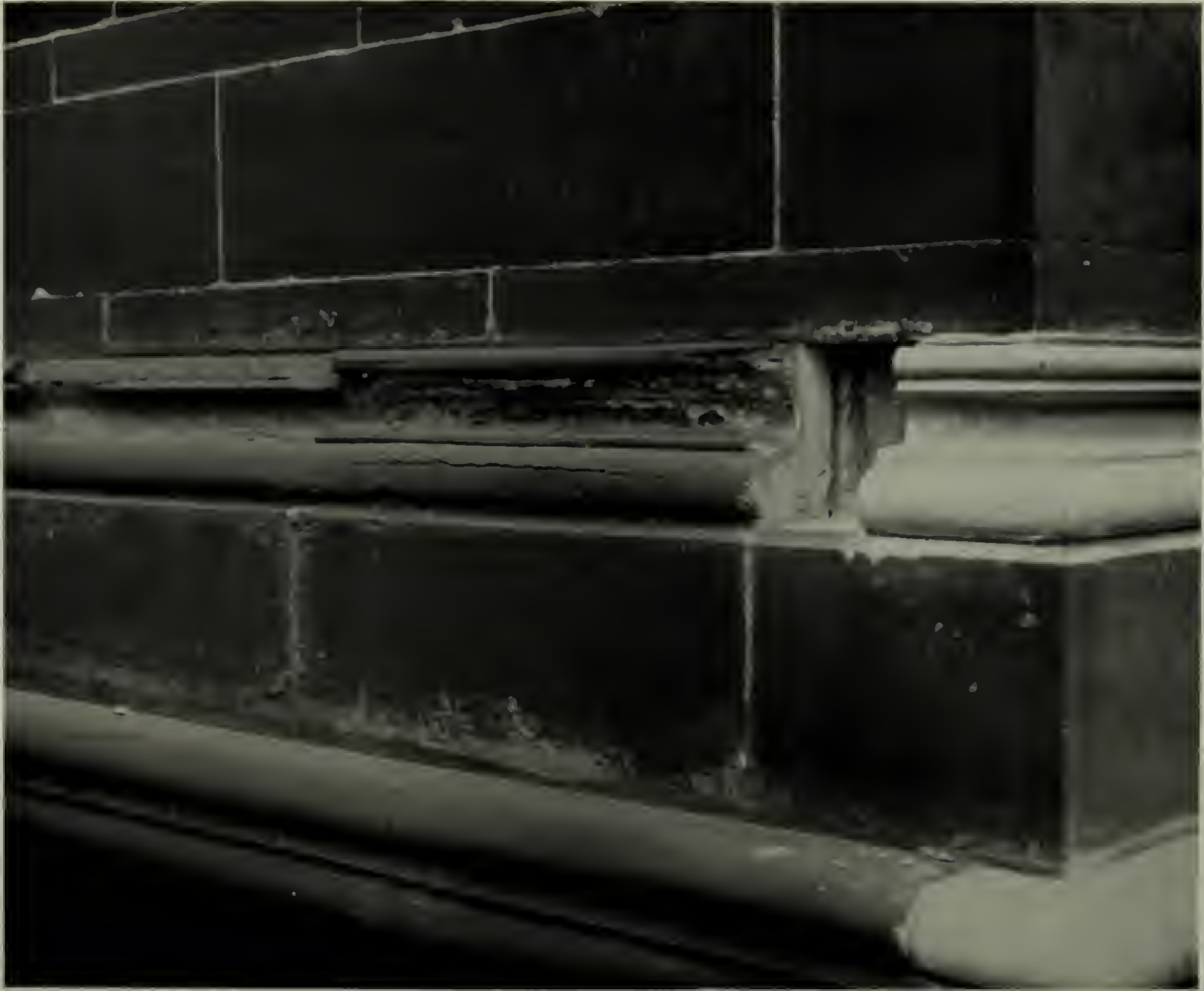
   This area comprises 3·6 acres of land formerly containing property which was included in the City of Manchester (Ardwick) Clearance Areas Numbers 1 to 4, 1938.

3. Area contained within Temperance Street, Union Street, Tipping Street and the boundary of a proposed major highway, (Ardwick).

   This area comprises 1·5 acres of land formerly containing property which was included in the City of Manchester (Ardwick) Clearance Areas, Numbers 1 to 4, 1938.



Central Smokeless Zone Extension
(A view from the College of Science and Technology).



Effect of air pollution and weather on stonework of the Town Hall built of Yorkshire sandstone in 1877. showing

4. Area contained within Ancoats Grove, Ancoats Grove North, Johnsons Buildings, rear of All Souls Church to Harding Street, Harding Street, Kirk Street, Tutbury Street, Grace Street, Dundas Street and Palmerston Street, Ancoats.

   This area comprises 5·33 acres of land formerly containing property included in the City of Manchester (New Cross) Clearance Areas, Numbers 1 to 5, 1936.

5. Area contained within Mitchell Street, Frost Street, Beswick Street, Pollard Street, Little Holme Street and Love Lane, Ancoats.

   This area comprises 3·3 acres of land formerly containing property included in the City of Manchester (New Cross) Clearance Areas, Numbers 1 to 5, 1936.

Towards the end of the year, occupation of the newly erected flats in the Mitchell Street area commenced and tenants interviewed by the smoke prevention nspectors were advised on obtaining and utilizing smokeless fuels.

Occupiers in the original central smokeless area and in the extended zones continued to co-operate in observing the requirements of the Corporation and where infringements have occurred they have been due to accidental causes such as mechanical failure or unskilled use of controls. Schemes have been in progress for the replacement of solid fuel firing systems to that of oil firing. One manufacturer, in the extended smokeless zone, had prior to the establishment of the extended area, converted his Lancashire boiler from coal to coke iring, so that no difficulty would arise from his plant upon the establishment of the extended area. However, due to repeated deliveries of unsuitable fuel from his supplier, his attention was directed to the use of oil fuel. As a result, he Lancashire boiler was dispensed with and a completely new ' packaged ' boiler with automatically controlled oil-firing equipment was installed. This has resulted in such economies due to higher efficiency, reduction in labour, ease of control and cleanliness, that the whole capital cost is expected to be recovered within a few years.

Recording of atmospheric pollution

Systematic observations of atmospheric pollution have been carried out by local authorities interested in this subject for many years and since 1927 he co-ordination and publication of these measurements has been undertaken by the Department of Scientific and Industrial Research.

For this purpose the pollution is generally sub-divided into three types—deposited matter, smoke and sulphur dioxide.

Measurement of deposited matter is by the use of the deposit gauge, one of which is situated at each of seven stations within the City, and for the purpose of comparison another is outside the City boundary at Knowle House, Handforth. In the table which follows, it will be noted that there was a reduction in deposited matter measured at all stations, including that at Knowle House, compared with the average of the previous five-year period. Variations in the mount of material measured may be due to changes in the rate of emission of himneys, but can also be due to meteorological factors, such as rainfall, direction and speed of wind. The effect of these variations is that a long period of observations may be necessary before conclusions of any significance can be drawn about the rate of emission of pollution. In that regard, with the exception of the Station at Rusholme, there has been an increase in deposited matter ollected at all stations in the five-year period ending December, 1954, compared with the five-year period 1939 to 1944. There is no doubt that expanded ndustrial activity and new housing development, with increased use of coal, will have caused an increase in air pollution.

Deposited atmospheric pollution

(Tons per square mile)

Monthly averages together with the averages for the previous five years

Station	Rainfall (inches)		Insoluble matter		Soluble matter		Total solids	
	1955	Five yearly average	1955	Five yearly average	1955	Five yearly average	1955	Five yearly averag
Baguley	2·0	2·6	4·42	6·19	4·91	6·36	9·33	12·55
Booth Hall	2·1	2·9	8·91	9·72	6·11	6·93	15·02	16·65
Heaton Park ..	2·3	3·0	5·84	8·19	5·08	6·68	10·92	14·87
Monsall	1·9	2·7	9·91	12·98	6·53	8·12	16·44	21·10
Philips Park	1·9	2·8	24.88	25·91	8·00	10·99	32·88	36·90
Rusholme	2·0	2·8	12·49	13·62	7·85	8·53	20·34	22·15
Withington	1·9	2·6	12·03	11·84	5·67	6·39	17·70	18·23
Average for all gauges..	2·0	2·8	11·21	12·63	6·30	7·71	17·51	20·34

Station at Knowle House, Handforth

Station	Rainfall (inches)		Insoluble matter		Soluble matter		Total solids	
	1955	Five yearly average	1955	Five yearly average	1955	Five yearly average	1955	Five yearl averag
Knowle House ..	2·0	2·7	3·34	3·94	3·95	4·94	7·29	8·88

Sulphur pollution

(*Measurements by the lead peroxide method*)

Weight in milligrams SO_3 per 100 square centimetres exposed surface per day—results reduced to batch A lead peroxide

Monsall		Rusholme		Withington	
1955	Five yearly average	1955	Five yearly average	1955	Five yearly average
3·4	3·7	2·2	2·3	1·5	1·5

NOTE.—In this table results actually obtained 1950/55 with Batch D and Batch E lead peroxide have bee multiplied by the factor 0·9 to allow for the smaller activity of the original Batch A lead peroxide. In previous year this factor has not been applied in laboratory reports but has been applied before figures appeared in the Atmospheri Pollution Bulletins.

There are several methods of measuring suspended impurity (smoke), th usual being that of the use of the daily smoke filter. This filter is customaril combined with the volumetric sulphur dioxide apparatus so that both sulphu dioxide and smoke pollution can be determined. The apparatus consists of small electrically driven pump which draws air through a filter paper at the rat of about 50 cubic feet per day, the actual volume of air being measured b means of a gas meter so that the concentration of pollution per cubic foot o air can be determined. The air enters from outside the building in an upwar direction, so as to prevent heavier particles falling into the sampling tube an the smoke or other polluting particles are collected on the filter paper. Th weight of solid matter collected by the filter paper is estimated generally b comparing the stain on the filter paper with a standard scale of shades. Th concentration of smoke is then expressed as milligrams per cubic metre of ai Although it is unwise to attribute extreme accuracy to any individual observa tion, this method is adequate for most purposes.

In the volumetric sulphur dioxide apparatus, the air, after passing through the smoke filter, is bubbled through a bottle containing a solution of hydrogen peroxide. The sulphur dioxide in the sample is converted into sulphuric acid by reaction with the hydrogen peroxide, and the quantity thus produced is estimated. Results are usually expressed as an average concentration of sulphur dioxide in parts per million parts of air, or milligrams per cubic metre.

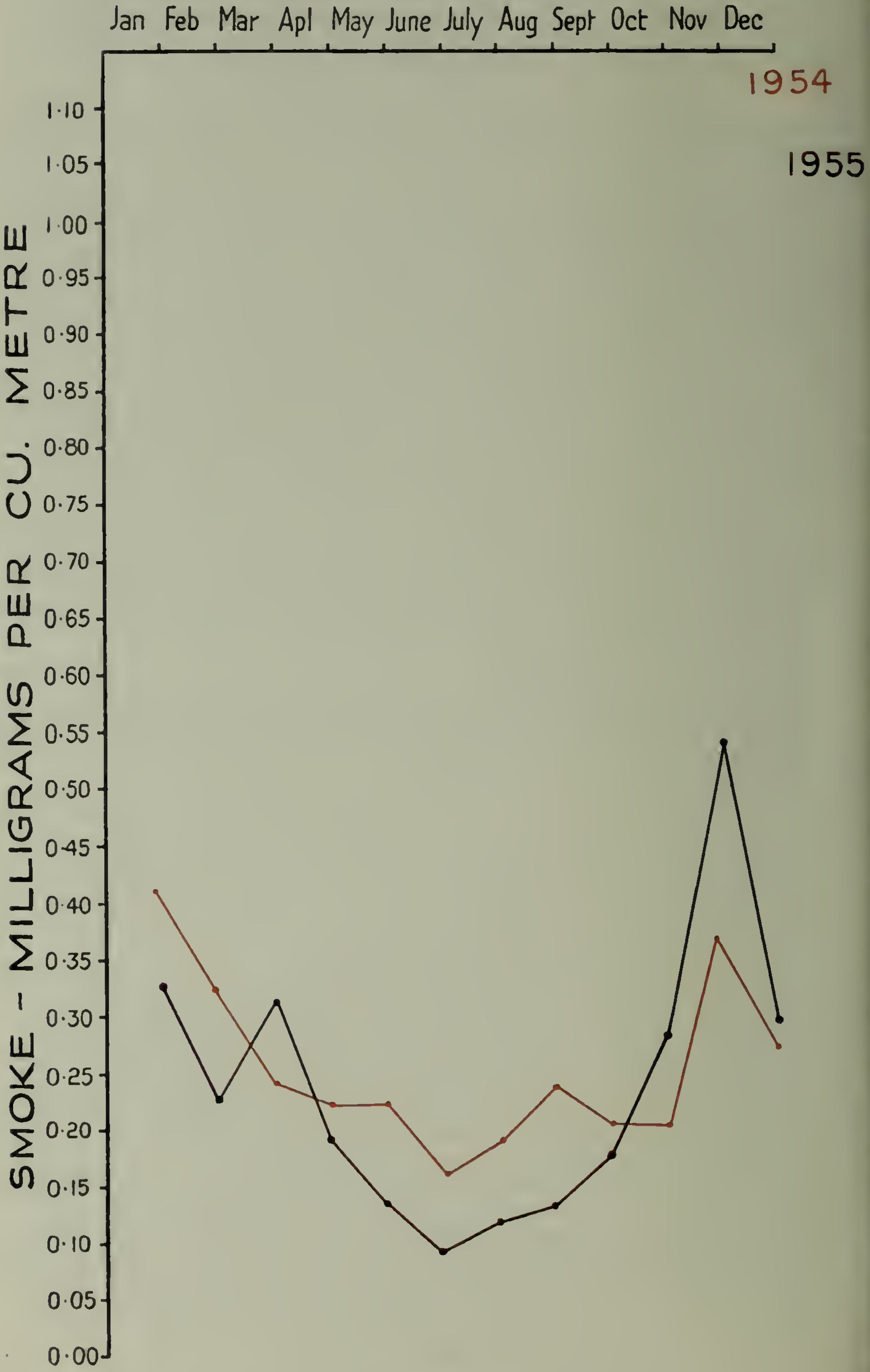
One such combined volumetric apparatus is in use at the Public Analyst's Laboratory in Rusholme.

Another method of measuring sulphur dioxide pollution is by the use of the lead peroxide instrument, of which three are sited in Manchester, at Monsall, Rusholme and Withington. This system was developed at the Building Research Station of the Department of Scientific and Industrial Research in 1932 and provides a comparative index of the ' activity ' of sulphur dioxide in the air which could be applied in measuring the relative effect of polluted atmospheres on the fabric of buildings. Briefly, the instrument consists of a prepared surface of lead peroxide which is exposed to the air for a period of one month in a standard apparatus. Atmospheric sulphur pollution causes lead sulphate to be formed and this sulphate is determined by the usual chemical methods of analysis. The results of the observations are reported as milligrams of SO_3 per day per 100 square centimetres of lead peroxide.

From the previous table on sulphur pollution measurement by the lead peroxide method, it will be seen that at Rusholme and Monsall there was a reduction in the weight of pollution measured during 1955 compared with the previous average over a period of five years. This may denote that less fuel was consumed during this one-year period, or that climatic conditions affected the reactivity of the measuring apparatus.

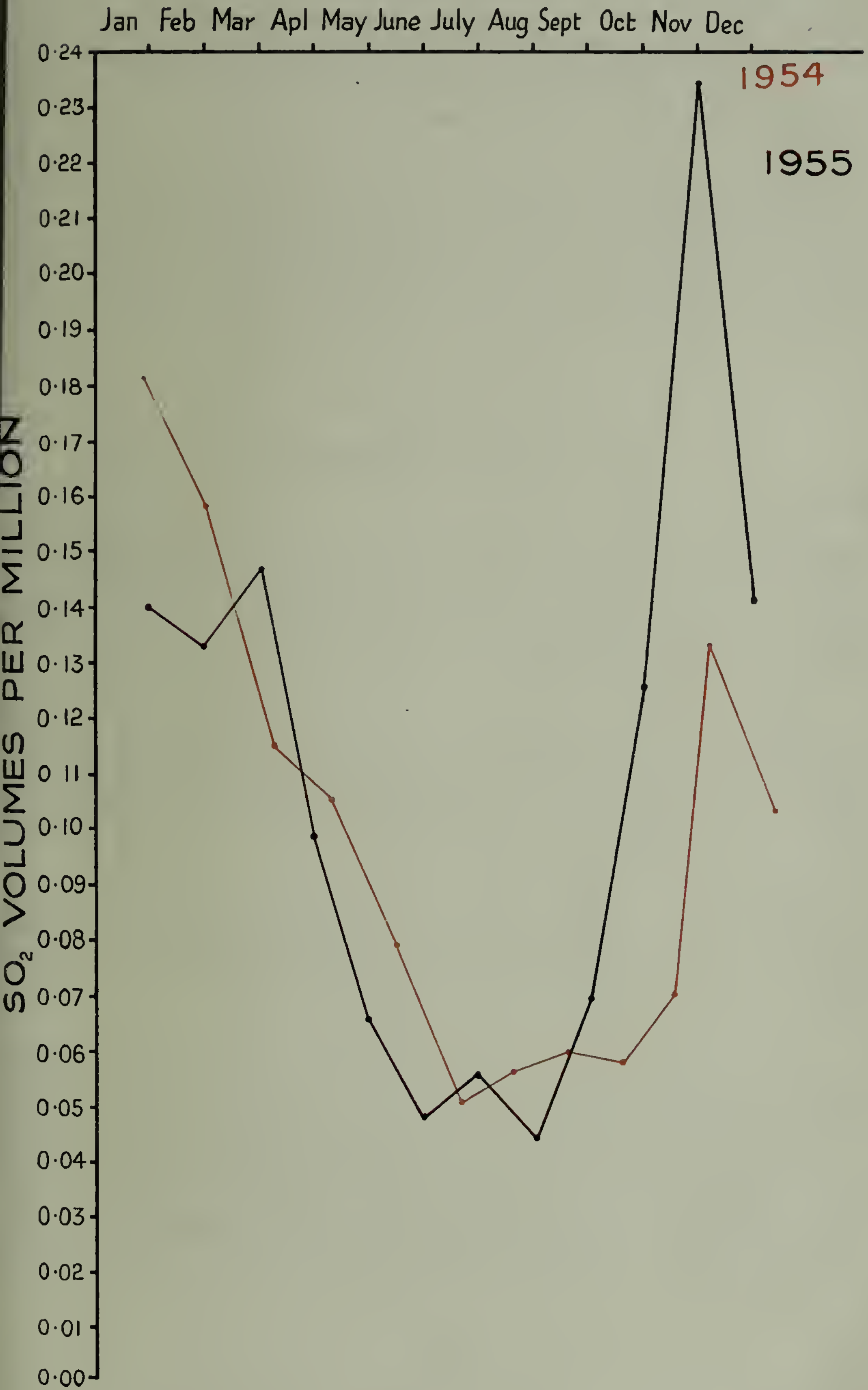
The following graphs indicate the smoke and sulphur pollution measured at Rusholme by the combined smoke and volumetric sulphur dioxide apparatus during 1954 and 1955.

Yearly cycle of suspended impurity (smoke) at Rusholme—monthly mean concentration in milligrams per cubic meter



Yearly cycle of sulphur dioxide by the volumetric method—monthly mean concentration at Rusholme

SO_2 per million



It will be seen that smoke pollution measured was generally less during 1955 until the late summer, when it increased in amount compared with the corresponding period the previous year, falling to a lower point in December. Sulphur pollution tended to follow somewhat the same course, reaching its maximum in November, and although falling again in December, it remained above that for the corresponding period in 1954. As would be expected in this area, the trends indicate that the pollution is mainly from domestic sources, falling from the winter period to lower amounts in spring and summer, and rising again during the colder months.

The highest smoke pollution measured occurred on 18th November, a day of fog and frost, when 3·4 milligrams of smoke per cubic metre and 1·3 p.p.m. of sulphur dioxide were recorded. The lowest smoke pollution was on 5th June, when 0·033 milligrams of smoke per cubic metre were measured. The minimum sulphur pollution measured was on the following day, 6th June, 0·017 p.p.m. of sulphur dioxide being recorded; fine weather occurring during both days.

HOUSING CONDITIONS

Repairs

46,852 inspections were made to secure repairs and so remedy nuisances at dwelling-houses by formal or informal action under the Public Health Act 1936, or the Manchester Corporation Act, 1934. For the purpose it was necessary to serve 11,858 preliminary and statutory notices with resort to court proceedings in 334 cases. 157 Nuisance Orders were granted by the Court, compared with 58 in 1954.

Default powers were exercised by the Department in respect of genera repairs, plumbing or drainage work at 526 houses, including 59 where the owners were not known. Work was also carried out in the maintenance or repair of lengths of public sewers serving 617 premises, mainly dwellings. In addition it was necessary to undertake work on behalf of and at the request of the owners at 69 dwelling-houses.

The total cost of all the various work so carried out by contractors on behalf of the Department was £5,085, of which £4,815 was recoverable from the owners concerned, the balance being concerned with lengths of public sewer under highways maintained by the Corporation, was charged to the Highways Committee.

Following the enactment of the Housing Repairs and Rents Act, 1954, there was some conjecture as to the extent to which tenants of " old control " houses or of " new control " houses subject to notice of " repairs increase " of rent would apply for certificates of disrepair and the reaction of owners to the granting of such certificates. Thus in 1954 the total number of 525 applications for certificates of disrepair had been in vivid contrast to 9 received in 1953, under the Rent and Mortgage Interest (Restrictions) Acts. In 1955 however, the rate of applications became steady to total 308 whilst the numbe of applications for the revocation of certificates of disrepair was 136 as compared with 9 in 1954.

1955

Housing Repairs and Rents Act, 1954

Applications for Certificates of disrepair and for revocations of certificates

(a) *Certificates of disrepair*

Applications received				A Dwelling-houses which have been the subject of notice of repair increase of rent				B Dwelling-houses *not* subject to notice of repair increase but are subject under Rent and Mortgage Acts, 1920, S. 2 (1) (c) and (*d*)			
Total	Subject to notice of increase A	Not subject but in respect of Rent and Mortgage Acts B	Not valid	Applications	Granted	Refused	Withdrawn	Applications	Granted	Refused	Withdrawn
308	219	58	31	219	196	4	19	58	29	—	29

(b) *Revocations of certificates of disrepair*

Dwelling-houses which have been the subject of notice of repair increase of rent				Dwelling-houses *not* subject to notice of repair increase but are subject under Rent and Mortgage Acts, 1920, S. 2 (1) (c) and (*d*)			
Applications	Granted	Refused	Pending	Applications	Granted	Refused	Pending
136	116	8	12	10	†11	—	1

† Includes 2 applied for in 1954.

Improvement or conversion grants

Housing Act, 1949

Housing Repairs and Rents Act, 1954

A grant may be made by a local authority to assist a private owner in modernizing his house either by improvement or conversion, provided that the house is suitable for the purpose, has a useful life of more than 15 years, and is not in danger of being dealt with as an unfit house either individually or within a clearance area.

In order to qualify for a grant it must be shown that when the proposed work has been done the dwelling will—

(1) be in a good state of repair and substantially free from damp;
(2) have each room properly lighted and ventilated;
(3) have an adequate supply of wholesome water laid on inside the dwelling;
(4) be provided with efficient and adequate means of supplying hot water for domestic purposes;
(5) have an internal or otherwise readily accessible water-closet;
(6) have a fixed bath or shower, preferably in a separate room;
(7) be provided with a sink or sinks and with suitable arrangements for the disposal of waste water;
(8) have a proper drainage system;
(9) be provided in each room with adequate points for gas or electric lighting (where reasonably available);
(10) be provided with adequate facilities for heating;
(11) have satisfactory facilities for storage, preparing and cooking of food;
(12) have proper provision for the storage of fuel, where required.

Applications for grants are received by the Director of Housing, who in each case seeks the views of the other departments concerned, prior to consideration by the Housing Committee. 128 such cases, almost entirely from owner-occupiers, were referred to this Department, as compared with 45 during 1954. 20 were in respect of the conversion of larger type houses into flats and 108 for the modernization of older houses by way of additional amenities such as the provision of bathrooms, hot water supply, etc. Adverse reports had to be given in 46 cases (15 in 1954) owing to the unfitness, bad arrangement or limited residual life of the properties.

Demolitions

In accordance with the requirements of Section 1 of the Housing Repairs and Rents Act, 1954, the number of unfit houses to be dealt with by clearance or deferred demolition in the City Council's first five years programme, has been submitted to the Minister of Housing and Local Government.

The programme provides that 14,500 houses will have been dealt with in the first five years, 7,500 by demolition and a comparison with the returns made by other local authorities as published by the Ministry in November, 1955, shows that Manchester has one of the largest concentrations of unfit houses in England and Wales.

Pre-war clearance areas

There are seven outstanding clearance areas which were represented prior to the war where Clearance Orders made by the City Council were not confirmed by the Minister owing to the outbreak of hostilities, and these have remained in abeyance. The areas include part of St. George's, Hutchins Street, Monday Street, Ruth Court, Enoch Street, Fog Lane and Oldham Road (New Cross), originally with a total of 1,623 houses, of which, however, 882 have been demolished, leaving 741 houses still to be dealt with.

The total number of houses demolished in the pre-war clearance areas during the current year was 52 and 53 families have been displaced, 52 being rehoused by the Corporation and 1 family finding other accommodation.

Post-war clearance areas

The total number of unfit dwelling-houses in the Ridgway Street, St. George's, Miles Platting, Mill Street and Harpurhey Clearance Areas at the 31st December, 1955, was 1,969.

The total number of houses demolished in these clearance areas in the current year by reason of structural danger and unfitness for human habitation was 270, and 350 families have been displaced of which 347 were rehoused by the Corporation.

Ridgway Street (Ancoats) Housing Compulsory Purchase Order, 1953

The rehousing of all the families affected by this, the first post-war order confirmed by the Minister of Housing and Local Government on the 25th March, 1954, is now completed. 127 houses have been demolished during the current year, leaving 63 vacated houses still to be demolished. The remaining 180 families who were awaiting rehousing at the beginning of 1955 have been rehoused during the year, 177 families by the Corporation, while 3 families have found their own accommodation.

St. George's Housing Compulsory Purchase Order, 1955

On the 2nd February, 1955, the City Council determined to proceed to secure the clearance of the St. George's Clearance Areas numbers 1 to 24 by compulsory purchase and 503 houses in the areas were included in an order made on the 27th May, 1955. A local public inquiry was held on the 25th October, 1955, and the Ministry of Housing and Local Government Inspector (Mr. S. G. Bulstrode, A.R.I.B.A.) heard objections concerning 79 houses. The decision of the Minister is awaited.

Since the date of representation of the areas as clearance areas on the 3rd July, 1953, 93 houses have been demolished by reason of structural danger and unfitness for human habitation. 104 families have been rehoused, 100 families by the Corporation and 4 families have found their own rehousing accommodation.

Miles Platting Housing Compulsory Purchase Order, 1955

On the 6th April, 1955, the City Council determined to proceed to secure the clearance of the Miles Platting Clearance Areas numbers 1 to 14 by compulsory purchase and the 770 houses in the areas were included in an order made on the 2nd August, 1955. A local public inquiry is to be held by the Minister of Housing and Local Government on the 17th January, 1956.

Since the date of the representation of the areas as clearance areas on the 16th February, 1954, 57 structurally dangerous and unfit houses have been demolished and the 57 families have been rehoused by the Corporation.

Mill Street (Ancoats) Housing Compulsory Purchase Order, 1955

On the 4th May, 1955, the City Council determined to proceed to secure the clearance of the Mill Street (Ancoats) Clearance Areas numbers 1 to 13 by compulsory purchase and 568 houses in the areas were included in an order made on the 26th September, 1955.

Since the date of representation of the areas as clearance areas on the 15th July, 1954, 9 structurally dangerous and unfit houses have been demolished and 11 families have been rehoused by the Corporation.

Harpurhey Housing Compulsory Purchase Order, 1955

An area of unfit houses bounded by Boardman Street, Woodland Street, Harpurhey Road and Rochdale Road, Harpurhey, originally declared a clearance area by the City Council on the 2nd March, 1938, was again surveyed and an official representation dated 14th April, 1955, involving 269 houses was submitted to the Health Committee.

On the 7th September, 1955, the City Council decided to secure the clearance of the area by compulsory purchase and the 234 remaining houses were included in an order made on the 19th December, 1955.

Since the date of representation of the areas, 46 structurally dangerous and unfit houses have been demolished and 82 families have been rehoused by the Corporation.

Individually unfit houses

Housing Act, 1936, *Section* 11 *and the Manchester Corporation Act*, 1946, *Section* 31

The City Council's first five-year programme provides for 2,500 individually unfit houses to be demolished concurrently with those dealt with by the planned approach in clearance areas. During the current year 640 individually unfit and structurally dangerous houses were demolished, 188 of which were situated in clearance areas awaiting further action. In the previous year 599 houses, including 103 in clearance areas, were so demolished. 856 families were rehoused by the Corporation from individually unfit houses requiring prompt demolition because of structural instability, whilst 33 families found their own accommodation.

Housing Act, 1936, *Section* 12

Two underground rooms let separately to two families in a house-let-in-lodgings were found to be unfit for human habitation. The necessary action was taken and upon the rooms being vacated the owner signed an undertaking not to re-let or allow the rooms to be again used for living or sleeping purposes.

Applications for rehousing on medical grounds

2,446 applications for rehousing on medical grounds were dealt with during the year. Letters from doctors, hospitals, welfare organizations and numerous other sources stress the hardship and detrimental effect of sub-standard, damp and overcrowded housing conditions upon the health of the applicant families. Every case is investigated and dependent on the Medical Officer of Health's assessment of the circumstances the applicant family is awarded a priority in rehousing on health grounds. Owing to the large number of applications in relation to number of houses available delay occurs in rehousing even the most serious cases. 1,849 or 76 per cent. of the applications received warranted a priority or preference for rehousing on medical grounds. The number of such families offered rehousing accommodation during the year was 755.

Abatement of overcrowding

It has not been practicable for the Department to keep an accurate record of the number of overcrowded houses in the City, but it is known that at least 2,222 dwelling-houses were overcrowded under the national standard on the 31st December, 1955.

51 new cases of overcrowding were reported during the current year.

Approximate number of overcrowded houses	Number of families	Adults	Children
1,317 houses with 1 family	1,317	8,029	2,726
645 ,, ,, 2 families	1,292	4,507	1,392
186 ,, ,, 3 ,, ...	558	1,293	380
73 ,, ,, 4 or more families	303	733	306
2,222	3,470	14,562	4,804

1,317 of the above families are occupying houses which are too small for their requirements and 905 houses are overcrowded by reason of lodger families.

In all cases of overcrowding brought to the notice of the Department, the Director of Housing is informed if the tenant and/or lodger families are registered for a Corporation house.

Houses let in lodgings

From registration provisions formerly applicable under bye-law requirements, the department is aware of 1,087 houses being let in lodgings, including 347 where the "occupier" is not resident, the sub-letting thus requiring the consent of the Corporation under section 57 of the Manchester Corporation Act, 1950. The actual extent of the letting of houses in lodgings is, however, considered greatly to exceed that number.

Since the Housing Repairs and Rents Act, 1954, repealed the byelaws made under section 6 of the Housing Act, 1936, the standards as to the suitability for occupation of houses let in lodgings have been replaced by the general criteria of section 9 of the 1954 Act. These refer to the adequacy of "natural lighting, ventilation, water supply, drainage and sanitary conveniences and facilities for storage, preparation and cooking of food and for the disposal of waste water" in relation to the number of individuals or households on the premises. In addition, the prevention of overcrowding of such houses is governed by section 12, local authorities with due regard to the relevant provisions of the principal Act determining their own standards for that purpose.

Common lodging houses

There was a reduction in the number of common lodging houses ; one with accommodation for 30 men being converted to warehouse use by the owners of the property.

The remaining 9 lodging houses, provide accommodation for 1,448 men, n 8 houses and 210 women in one owned by the department. One of the men's houses with accommodation for 464 is also owned by the department.

It was not necessary to institute proceedings to secure compliance with the department's requirements at any of these houses and close liaison continued with the keepers especially in precautions against vermin infestations. 127 men and 2 women from common lodging houses voluntarily attended the department's clinic for personal cleansing and disinfestation of their clothing.

Moveable dwellings

The problem of the prolonged use of land by colonies of certain types of caravan dwellers without the consent of the owners or the Corporation has remained acute.

Because of nuisance arising, in particular from the absence of proper sanitary conveniences, water supply and drainage, caravan dwellers on 13 different sites were dealt with under the provisions of the Public Health Act, 1936, especially section 268. It was necessary to serve 185 statutory notices on the caravaners and Court orders were granted in 57 instances together with penalties and costs.

The department's experience, however, shows the necessity for more powers to prevent caravans being kept on unsuitable sites and to secure the expeditious removal of any which might otherwise stay for prolonged periods before removal could be enforced under existing law.

Accordingly, provisions have been included in the Corporation Bill, 1955, which would—

(*a*) make it necessary for the Corporation's consent to be obtained before a moveable dwelling is placed or kept on land within the City;

(*b*) make it an offence to let or permit to be used any land in the City for occupation by a moveable dwelling unless the land has first been surfaced and adequate services provided;

(*c*) enable the Corporation, where the conditions are unsatisfactory, to apply for a Court order requiring any moveable dwelling to be removed from a site and prohibiting its use at such places or within such area as may be specified in the order;

(*d*) enable the Corporation to make Byelaws to secure good and orderly conduct of persons on camping grounds and to prevent annoyance being caused to other people.

Canal boats

The standards of living accommodation in canal boats used for the conveyance of goods remain those originally prescribed in Regulations under the Canal Boats Act, 1877. Correspondingly they fall short of modern standards and are in vivid contrast with those embodied in two newly built boats recently registered by the department. These new boats form part of the modernisation of a local company's fleet in the replacement of the old wooden with all-steel barges, some with diesel engines, making one of the most modern fleets of barges in the country. All these post-war additions provide vastly improved facilities, the latest including waterclosets, stainless steel washbowls, piped water supply, improved methods of ventilation and lighting and more spacious cabins. The power driven boats have electric lighting. This local company does not allow any women or children on its boats.

The total number of boats on the department's register is 201 but many are not in use, certainly not in the City area, an indeterminate number being laid up at different wharves throughout the country. 68 inspections were made of boats within the City and no contravention of the Regulations was found.

OCCUPATIONAL CONDITIONS

Factories

Factories Act, 1937—inspections of mechanical and non-mechanical factories, etc.

Premises	Number on register	Inspections	Number of written notices	Occupier prosecuted
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by local authorities	518	28	—	—
(ii) Factories not included in (i) in which Section 7 is enforced by the local authority	5064	1362	26	—
(iii) Other premises in which Section 7 is enforced by the local authority (excluding outworkers premises)	100	61	—	—
Total	5682	1451	26	—

Cases in which defects were found

Particulars	Defects				Number of cases in which prosecutions were instituted
	Found	Remedied	Referred to H.M. Inspector	Referred by H.M. Inspector	
Want of cleanliness (Section 1)	8	2*	—	8	—
Overcrowding (Section 2)	1	—	—	1	—
Unreasonable temperature (Section 3) ..	—	—	—	—	—
Inadequate ventilation (Section 4)	—	—	—	—	—
Ineffective drainage of floors (Section 6)	—	—	—	—	—
Sanitary conveniences (Section 7)					
(*a*) Insufficient	6	7†	—	6	—
(*b*) Unsuitable or defective	151	118‡	—	143	—
(*c*) Not separate for sexes	11	12§	—	11	—
Other offences against the Act (not including offences relating to outwork)	6	—	6	—	—
Total	183	139	6	169	—

* Including 1 from previous year.
† Including 5 from previous years.
‡ Including 81 from previous years.
§ including 10 from previous years.

Factory outworkers

The supervision of premises in which certain classes of outwork are carried on is exercised under provisions contained in the Factories Act and the Public Health Act, and is designed to prevent the employment of persons in unwholesome premises and the spread of infectious disease.

There was a reduction in the number of firms employing outworkers and also in the number of outworkers employed; 414 firms employed 2,778 outworkers as compared with 469 and 3,081 respectively in 1954. 805 of the outworkers resided outside the City and notification of this employment was sent to the local authorities concerned. Information was received from other local authorities concerning 25 outworkers living in Manchester and employed by firms outside the City boundary.

The reduction in the numbers of outworkers is mainly in the clothing trade where 1,532 outworkers were employed as compared with 1,778 the previous year. Other trades employing outworkers were umbrellas (202) household linen (101) soft furnishings (130) stuffed toys (4) and lampshades (4).

The general standard of cleanliness was satisfactory, but informal action was necessary in 5 instances. No case of infectious disease was reported from the home of an outworker.

The occupiers of 8 factories failed to keep records in the prescribed form and these omissions were remedied as a result of informal action by the Department.

Shops and employment of young persons

With the exception of the provisions regarding evening and Sunday closing of shops, which are dealt with by the Chief Constable, the whole of the Shops Act, 1950, is administered by the Department.

1,540 visits were made by the district sanitary inspectors and in 20 instances informal action was taken to secure the display of the necessary forms as to assistants' half holidays, hours of employment of young persons and seats for shop assistants. In all cases the forms were promptly obtained. Other cases where informal action was necessary included temperature (7), lighting (1), sanitary accommodation (5) and washing facilities (5). In no instances were summary proceedings instituted.

3 applications for exemption from compulsory closing on Sundays for persons observing the Jewish Sabbath were granted. There were no cancellations and 293 persons are now registered.

9 applications under the provisions of Section 42 dealing with exemption from the half day closing at Exhibitions were granted, the Committee being satisfied that the retail trade or business carried on was subsidiary or ancillary to the main purpose of the exhibition.

The Manchester, Salford and District Butchers and Meat Traders Association made application in accordance with Section 8 of the Act, for the day fixed by the City Council in 1920 as the half day holiday for the butchers' shops to be changed from Wednesday to Saturday, or at the option of the shopkeeper, Friday. The present alternative to Wednesday as the early closing day for butchers, is Saturday. The proposal was advertised in the press, a register of butchers' shops in the City prepared and a poll taken according to the procedure laid down in the Act. The result of the poll was as follows:—

Total number of voting papers issued	759
Number of votes in favour of change	435
Number of votes opposed to the change	194
Number of papers not returned	130

The Corporation have to be satisfied that at least two thirds of the shops affected approve the order and as those in favour of the change did not secure such a majority the change requested was not made.

Since the reports of the Committee of Inquiry on Closing Hours of Shops in 1947 and on Health, Welfare and Safety in Non-Industrial Employment and Hours of Employment of Juveniles in 1949, there has not been any change in the law relating to these issues. A private member's Non-Industrial Employment Bill which received a second reading in April, did not progress further, but two Government Bills have since been published and deal respectively with certain railway premises not within the existing scope of the Factories Act, and with certain agricultural occupations. In each instance the responsibility of the Corporation would be limited to that of dealing with sanitary conveniences. Submissions by local authority and other associations against centralised control of other environmental factors included in the Bills have not been accepted by the Ministries concerned.

GENERAL SANITARY CONDITIONS

nfectious diseases

The district sanitary inspectors investigated the circumstances associated with 2,145 cases of notifiable infectious disease. The enquiries as to possible source of infection and the adoption of necessary measures to prevent the spread of infection entailed 2,321 visits, an increase of approximately 30 per cent. on the number in 1954. This was primarily due to an increase in the number of notified cases of dysentery.

Rodent control

In accordance with the requirements of the Prevention of Damage by Pests Act, 1949, a continuous survey has been maintained by a staff of operators, under the supervision of the Rodent Executive Officer and an assistant. In the course of that survey 57,822 premises were visited.

In addition all notifications or complaints of infestations of " land " which includes any building or part of a building and any land covered by water, have been investigated, and where necessary, appropriate eradicatory measures taken.

Complaints of infestations

3,346 complaints were received concerning premises not previously known by the Department to have been infested. This was an increase of 266 (8 per cent.) on the number of such complaints during 1954, but it is not deemed to represent an actual increase in total infestation. Investigation of many complaints elicited no more than slight casual infestation or failed to reveal any evidence. In only three were the infestations of a major character.

14,499 premises (10,672 dwelling-houses and 3,827 business premises), were visited on complaints of infestations: rat infestations were found at 2,197 premises (1,536 dwelling-houses and 661 business premises) and mice at 2,328 premises (1,420 dwelling-houses and 908 business premises).

The nature of the premises concerned is indicated below.

Nature of premises infested

Type of premises	Number of premises				
	Rat infested			Mice infested	Totals
	Internal	External	Total		
Dwelling-houses	645	891	1,536	1,420	2,956
Factories, workshops, workplaces	140	17	157	174	331
Shops	69	29	98	125	223
Premises where food is prepared, sold or stored	82	38	120	172	292
Warehouses	51	2	53	89	142
Offices	27	3	30	136	166
Restaurants, licensed premises, clubs ..	31	17	48	43	91
Hospitals, welfare centres, public institutions	6	16	22	35	57
Schools	13	5	18	105	123
Churches	14	2	16	8	24
Garages, wooden structures	18	15	33	3	36
Cinemas, theatres, public halls	10	3	13	16	29
Sewage disposal works, slaughterhouses, stables	—	4	4	—	4
Parks, sports grounds	—	2	2	—	2
Airports	2	1	3	—	3
Land	1	29	30	1	31
Tips	—	10	10	—	10
Fire station	—	1	1	—	1
W/D property	1	2	3	1	4
Totals	1,110	1,087	2,197	2,328	4,525

Causes of infestations

Defective or disused drains remained a major direct cause of the rat infestation of premises (31·68 per cent.), especially in the older built-up areas of the City where such conditions are often associated with structural defects of buildings which allow access of rats to the premises. In addition a neglect of occupiers to observe elementary hygiene in the proper disposal of food scraps and in the proper storage of food was often a primary cause of infestations, especially of mice in dwelling-houses.

Classification of causes of rat infestation in premises primarily visited during 1955

Cause	Rat-infestation				Total premises rat-infested	Percentage of total rat-infested	Premises mouse-infested
	Internal		External				
	Business premises	Dwelling-houses	Business premises	Dwelling-houses			
Directly due to or associated with defective or disused drains or sewers	109	202	74	311	696	31.68	—
Nature of business in premises or vicinity	99	—	33	10	142	6.46	262
Tips, refuse, accumulations, market areas	—	2	1	13	16	.73	3
Neglect in protecting food and food scraps	244	298	29	365	936	42.62	2,016
Poultry kept	2	2	5	13	22	1.00	2
Dilapidated premises; defects in structures	12	24	6	10	52	2.37	29
Building operations, demolitions	2	35	3	15	55	2.50	13
Vicinity of open or culverted water-courses	11	6	10	33	60	2.73	—
Railway sidings	—	1	—	2	3	.13	—
Casual infestation	10	51	14	140	215	9.78	3
Totals	489	621	175	912	2,197	100.00	2,328

Extermination service of the Department

This service is available without charge in respect of dwelling-houses. Treatment of business premises is undertaken on request of owners or occupiers and is subject to the cost being recoverable on the basis of the operator's time and material used.

The methods of treatment are in accordance with the standard guidance of the Ministry and the anti-coagulent rodenticide " Warfarin " has been used more extensively on account of its relative safety and proved effectiveness.

4,042 treatments (an increase of 26 per cent. on the year 1954) were carried out as follows:—

1,327 (32·8 per cent.) for rats, and
2,715 (67·2 per cent.) for mice;
3,936 treatments were by poisoning (3,124 by use of " Warfarin "),
71 by trapping, and
35 by combined poisoning and trapping.

In the course of these treatments 88,023 baits were laid; 41,654 of these were poison baits, of which 20,931 (50·2 per cent.) were taken.

Extermination by private operating companies

The activities of private operating companies or private individuals in the treatment of premises generally are on a contractual basis with the owners or occupiers, and are virtually limited to business premises. Except when ascertained in the course of visits made by its operators the Department is not aware of the extent or efficiency of these measures.

Extermination by other Corporation departments and nationalized undertakings

Eradicatory measures are carried out at their particular properties by other Corporation departments and by the nationalized undertakings.

These departments and undertakings report that 677 rats and numerous mice were destroyed on their properties, mainly by poisoning.

Extermination of rats in public sewers

The City Surveyor's Department continued to maintain baiting of the sewers as a routine measure.

Particulars of the work done during 1955 are tabulated below :—

Treatment	Number of manholes test baited	Number of manholes baited	Number of manholes showing bait taken
Balance of initial treatment—			
No. 2 maintenance	—	590	148
Test bait	1,220	—	159
No. 1 maintenance treatment	—	4,229	1,015
Totals	1,220	4,819	1,322

Revisits to treated premises

In all cases where treatment is carried out, revisits are made to determine the efficiency of work, and the visits are continued until there is no evidence of bait being taken or other visible signs of infestation.

7,997 revisits were made by the operators to infested premises, and at 5,247 of these premises it was found that the treatments had cleared up the infestations. This total includes 4,042 premises cleared by Corporation treatments, the remainder having been dealt with satisfactorily by occupiers.

The increased availability of the anti-coagulent rodenticide " Warfarin " appears to have some bearing on the increase in the number of persons who undertake treatment of their own premises. It is necessary, however, that all such users should recognize that "Warfarin " is a poison and whilst more safe to use than the scheduled poisons, it remains essential to take care in its use.

Tracing of rat burrows in relation to drainage infestation

Conditions found and action taken as a result of examinations	By City Surveyor	By owners and occupiers	By Sanitary Services Division	Totals
Number of examinations made	115	54	70	239
Sewers reconstructed	3	—	—	3
Minor defects in sewers repaired	49	—	—	49
Disused privy-midden drains removed	15	5	—	20
Other disused drains or sewers removed or otherwise dealt with	22	16	1	39
Defective drains remedied..	—	48	8	56
Defective drains and sewers repaired by Corporation at owner's expense..	—	—	18	18
Street drain inlets repaired	4	—	—	4
Outward burrows consolidated	23	—	—	23
Surface burrows consolidated	16	19	—	35
Undermining found to be due to causes other than rats	8	—	—	8
Totals	140	88	27	255

Eradication of insect pests

The most common household insects to be the subject of complaints to the department or requests for advice as to eradication, were cockroaches (blatta orientalis), bed bugs (cimex lectularius) and fleas (pulex irritans). Some householders confused the ubiquitous "spider-beetle" (ptinidae) with the bed bug, which presumably they had never seen. Numerous enquiries also dealt with clothes moths and one concerned a carpet beetle infestation of an extensively carpeted building in the central area.

The actual incidence of the insect infestation of properties throughout the City is not known but in the detailed inspection of 269 houses for inclusion in a clearance area, 108 or 40 per cent. of the houses were found to be infested with bed bugs. In addition the Housing Department found it necessary to disinfest the furniture and effects of 985 families on their allocation to Corporation houses. In 1954 the incidence of infestation in clearance area property was 31 per cent. and the average for the pre-1939 years was approximately 70 per cent. Although the possibility of the post war availability of modern insecticides with residual toxicity may be of some significance to the lower incidence of infestations now recorded, the Department is not satisfied that any firm conclusion can be reached on the information available at present.

An unusual number of complaints were received from two districts in respect of both mosquitoes and chironomidae (non-biting gnats). It appeared that the exceptionally prolonged period of warm dry weather was of significance to the occurrences which in one locality necessitated action by the department to secure the treatment of a disused length of canal in which extensive breeding of mosquitoes was taking place.

The commencement of the demolition of the first post-war clearance area, comprising 238 houses, gave an opportunity to reconsider the measures to be adopted to prevent the spread of any vermin from infested material salvaged from the demolished properties. This review was compelled by difficulties, referred to in the report of 1954, which virtually preclude the adoption of the pre-war practice of block fumigation of bug infested houses with hydrogen cyanide gas.

In the area concerned the demolitions are being carried out by the Housing Department's Works Branch and it has been possible to secure a reliable scrutiny and selection of infested material, either for prompt destruction on the site by burning the infested timber, or in treatment with an insecticidal spray possessing a residual toxicity. A final assessment of the practice awaits completion of the demolitions.

Drainage work (defects and repairs)

Examination of drains

It was necessary to examine the drainage system at 221 premises.

Generally the examinations arose from the presence of percolations of water or offensive effluents into floor cavities, subsidences in yards or passages, offensive smells in or around premises or rat burrowing evidently from the drains in connection with the premises concerned.

Defective conditions found at 180 of the premises were remedied after service of statutory notices upon the owners. The work necessary at six premises was carried out voluntarily by the owners.

Stopped up drains and sewers

The Medical Officer or Sanitary Inspector is empowered under the provisions of the Manchester Corporation Acts, 1946 and 1950, to serve notices requiring attention within 48 hours to choked drains, private sewers, waterclosets and other sanitary appliances. Notices affecting 289 premises were complied with by the owners whilst at 105 premises the necessary work was carried out by Drainage, etc., Works Branch of the Department in default or as a result of the owners requesting the Corporation to undertake the work on their behalf.

Section 24 of the Public Health Act, 1936, as extended by Section 33 of the local Act of 1946, gives similar powers to the Medical Officer or Sanitary Inspector regarding immediate action on public sewers, and defects in public sewers at 512 premises were referred to the Drainage, etc., Works Branch, who carried out the work necessary in accordance with the emergency provisions of the Act.

Sanitary accommodation

Although the number of premises where the sanitary conveniences are not on the water carriage system has been reduced since 1954, there are still 342 premises where pail closets form the sanitary accommodation.

These premises are situated mainly in the Wythenshawe area, the continued development of which is providing sewers within a reasonable distance of the properties concerned and thereby enabling conversions to be made. In some cases, however, such development will cause the early demolition of some of the properties and in these instances conversions will not be undertaken. This also applies to premises requiring priority of consideration for inclusion in clearance areas elsewhere in the City.

Concerning temporary conveniences on building sites, the Department insists that, wherever possible, waterclosets shall be provided for the use of operatives. Where this is physically impracticable, however, temporary pail accommodation in portable structures is required and the Cleansing Department arranges for the collection and renewal of the pails.

At 58 premises voluntary alterations or additions were made to sanitary accommodation in accordance with plans submitted by contractors to the Department, the work being supervised by the district inspectors.

Disposal of refuse

There are 36 private sites at which trade refuse is tipped and although nuisance is generally avoided, the spontaneous combustion of colliery waste caused the emission of fumes and smoke at two long standing tips in ravines. The application of control measures was necessary and continuous fine spraying with water is being maintained by the owners.

The Cleansing Department disposed of 161,145 tons of refuse on its 7 controlled tips without giving rise to complaints and dealt with 38,592 tons by separation and incineration, and 8,084 tons by utilization, i.e., salvaged materials, clinkers, etc.

Offensive trades

Offensive trades as defined by the Public Health Act, 1936, and the Manchester Order of 1921, are carried on at 57 premises.

These trades are the manufacture of manure and fertilisers from animal matter etc. 1, blood boiler 1, bone boiling and fat extraction 2, fat melters 2, fish curers 2, fish curer and pickle manufacturer 1, gut scraper 1, oil distiller 1, pickle and sauce manufacturers 2, rag and bone dealers 21, rubber spreaders 7, rubber substitute spreaders 3, size maker 1, soap boilers 2, tallow melters 2, tanners 3 and tripe dressers and boilers 5.

The extensive alterations to and re-equipping of premises which were the subject of court proceedings in 1953 and were referred to in the report for 1954, were completed during the year.

Complaints were received of offensive smells from one of the premises at which the nature of the business in the treatment of animal waste demands especial care, but it did not prove necessary to institute formal proceedings.

The limited licences granted in connection with 13 premises were renewed for a further period of 2 years, the businesses at these premises having been carried on in a satisfactory manner during the period of registration.

Effluvium nuisances

The exceptionally dry, warm weather with a considerably reduced flow in rivers and streams pungently accentuated the recognised heavy pollution of the City's rivers. Complaints related to the Irwell and the Irk on the condition of which the statutory authority, the Mersey River Board, reported adversely, eaving the department in no doubt as to the inevitably long term nature of measures to secure substantial improvement.

Nuisance also arose in a stream within the City from the discharge of sewage nto the stream at a point outside the boundary. Whilst this occurrence was of a temporary nature associated with sewerage reconstruction work and a diversion of sewage, it coincided with an abnormally low dry weather flow in he stream and caused a serious nuisance on which representations were made o the responsible authority.

Industrial sources of offensive smells in different districts necessitated xtensive enquiries to trace plants or processes involved, and appropriate action was taken either by the department under the Public Health Act, or by H.M. Inspector in respect of the Alkali, etc., Works Regulation Act.

Complaints of the chemical pollution of the atmosphere in Miles Platting, specially on the presence of hydrogen sulphide, were the subject of special bservations and discussions with H.M. Inspector. Localised emissions of ydrogen sulphide found to be arising from sewers were dealt with by the Rivers Department, but that source did not account for the more general presence of the effluvium in the area. Further observations directed attention o a particular works containing a plant manufacturing carbon bi-sulphide. The waste gases from the plant were treated before discharge to the atmosphere, but in the circumstances H.M. Alkali, etc. Works Inspector arranged with the manufacturing company that additional measures should be adopted and work being undertaken for that purpose.

The intermittent penetration of fumes from a dry cleaning establishment into adjacent premises caused a recurrence of a nuisance previously the subject of a nuisance order. The circumstances necessitated further proceedings, and penalties were imposed by the Court.

Noise nuisance

Statutory control of excessive, unreasonable or unnecessary noise, if also injurious or dangerous to health, is provided by the Manchester Corporation Act, 1946, section 40.

Complaints involving 30 different sources of noise were investigated and as in previous years involved both industrial and domestic premises. With one exception it was not necessary to invoke formal proceedings, managements or individuals concerned usually being co-operative in adopting measures to reduce the noise to a minimum where otherwise impracticable to suppress it entirely.

The case involving formal action arose from the noise of diesel electricity generators and amplified music of a pleasure fair in close proximity to dwelling-houses. Statutory notice was served upon the proprietor of the fair which, however, vacated the site.

In another instance of noise from an industrial source, observations continue on the need for more effective measures to curtail noise arising from the late night use of a loading bunker handling stone debris.

In five instances sources of " unwanted sound " were power-driven sewing machines in use on boarded floors in terraced or semi-detached dwelling-houses without sufficient regard to insulation, especially against structure-borne sound. With such conditions, particularly when the machines were operated late at night, there was interference with the neighbours' normal quiet enjoyment of their adjoining homes. In each case, however, no difficulty was experienced in securing the remounting or appropriate resiting of the machine and usually avoidance of its use beyond certain times.

Land used by pleasure fairs

In post-war years pleasure fairs set up on numerous sites in the City, especially in congested areas in close proximity to dwelling-houses, have caused complaints from residents alleging noise and other nuisances.

During the year noise nuisance was found to arise from fairs at 4 sites which are deemed to be unsuitable for such use and in one instance it was necessary to take statutory action under Part III of the Public Health Act, 1936 and Section 40 of the Manchester Corporation Act, 1946, following which th site was vacated. In the three other cases the fairs left the sites before an formal action could be instituted.

Post-war experience has been such that in 1950 the Corporation sough power to control the short period use of land by pleasure fairs. The attemp was unsuccessful but discussions have ensued with the Showman's Guil with the object of securing an undertaking that the Guild would require it members to use only those sites approved by the Corporation in consideratio of which sites for pleasure fairs would be made available in certain parks and recreation grounds on prescribed terms and conditions. The Guild has expressed its willingness to observe such an arrangement.

Rag flock and other filling materials

106 premises are registered under the requirements of the Rag Flock and Other Filling Materials Act, 1951, as being premises where designated filling materials are used in the manufacture of bedding (61); upholstery (35); soft toys (7); cushions (2); and baby carriages (1). The manufacture of bedding ceased at 2 premises.

4 premises are licensed for the storage of rag flock for distribution to registered premises. There are no manufacturers of rag flock within the City.

10 samples of designated filling materials: loose washed flock (4); rag flock (2); mixed feathers (2); woollen felt (1); and woollen flock (1), were taken and examined by the prescribed analysts who found them to conform to the standards prescribed by the Rag Flock and Other Filling Materials Regulations.

Export of washed rags and second hand clothing

Importing countries generally require exporters of rags and similar articles to supply certificates of cleanliness of such materials as a condition of entry into the country. Accordingly, dependent on the particular materials involved it is customary for one of the following treatments to be applied either by or under the supervision of the department:—

(*a*) washing and sterilising by boiling in soda solution, or

(*b*) high pressure steam disinfection, or

(c) formalin disinfection.

Inspections were made and certificates issued in respect of the following:—

Articles	Quantity	Importing Country
Washed rags	13 tons	Africa
	1 ton	Cyprus
Second-hand clothing	2,100 articles	Africa
	500 pairs of shoes	Do.
	4 parcels	Poland
	4 bundles	Eire

In addition 15 cases of fibre packing for foodstuffs were disinfected and certified as having been so treated for export to New Zealand.

Swimming baths

The standard of purity of the water in the 14 Corporation and 7 privately owned swimming baths continued to be high.

Seventy visits were made to ensure that the recommended standards were maintained and for that purpose tests were carried out to determine that the pH value of the bath water was effective for satisfactory filtration; also that the free chlorine present in the water was as recommended by the Ministry of Health to ensure adequate sterilisation. All samples taken for bacteriological examination by the Public Health Laboratory Service were found to be satisfactory, the Laboratory in each case giving the following report:—

> " Probable number of coliform bacilli,
> MacConkey 2 days, 37° C. .. .. .. 0 per 100 ml.
> Probable number of faecal coli .. .. 0 per 100 ml."

The good results shown in the testing of the water and the correspondingly excellent laboratory reports are particularly commendable having regard to the exceptionally heavy bathing loads due to the continued fine weather during the summer: the Corporation Baths alone had an increase of a quarter of a million bathers.

The large week-end bathing loads at a private open air pool caused some concern to be expressed to the department as to the effectiveness of the filteration plant in coping with the exceptional conditions. A series of tests and bacteriological examinations of samples, however, showed that there was no lack of adequate control.

Establishments for massage or special treatment

Part IX of the Manchester Corporation Act, 1924, and the byelaws made thereunder deal with the licensing and conduct of establishments for massage or special treatment other than those provided through the National Health Service.

In exercising these licensing provisions regard is had to the nature and extent of the experience or the qualifications possessed by applicants and in respect of qualifications those prescribed in the National Health Service (Medical Auxiliaries) Regulations, 1954, are an authoritative criterion. At present the licensed establishments are 53 for chiropody treatment, 14 for phsyiotherapy and chiropody and 21 for physiotherapy.

Hairdressers or barbers

22 persons and their premises were registered during the year and there are now 687 persons together with the premises where they carry on the trade or business of hairdressers or barbers registered under the provisions of section 42, Manchester Corporation Act, 1946, and the relevant byelaws. These deal with the cleanliness of the premises and equipment used and also of the persons employed therein. In one instance failure to maintain cleanliness of the premises necessitated the occupier being cautioned. Compliance with the department's requirements followed without any formal proceedings.

Concerning any new establishments, liaison is maintained with the City Surveyor's Department which notifies the Health Department of all applications under town planning provisions involving this trade or business.

Sale of certain poisons

The sale of poisons by retailers who are not registered pharmacists is governed by the Pharmacy and Poisons Act, 1933 and the Poisons Rules. The Part II List prescribes those poisons which may be retailed by "listed sellers," viz., those listed by the local authority as distinct from ,, authorised sellers " registered by the Pharmaceutical Society.

The number of listed sellers registered by the department was reduced to a total of 1,117 including 94 new registrations as compared with 1,166 in 1954, and 1,128 in 1953. 143 listed persons discontinued the sale of poisons and 13 changes of occupiers were reported. Fees received totalled £294 15s. 6d.

The Part II List poisons include those of the type usually retailed by grocers, hardware dealers, seedsmen, horticultural suppliers and hairdressers, by reason of the particular poisons often being the constituents of disinfectants, insecticides, fungicides, rodenticides and household cleaning agents. Similarly, certain hair dyes containing a poison are in the Part II List, hairdressers may also be " listed sellers."

Listed sellers may also retail a limited number of poisons included in the first schedule of the Poisons Rules, such as arsenical compounds, nicotine and mercury chlorides, but being more dangerous than the other poisons in the Part II List, are subject to special restrictions limiting the form in which the poison may be sold by a listed seller and only by him or his named deputy.

The general requirements to be observed in connection with the sale of the Part II poisons, having special regard to labelling, packaging, storage arrangements and inspection of records, were supervised by the district sanitary inspectors and no contraventions were reported.

Exhumations

District sanitary inspectors attended 8 exhumations during the year to ensure due care and attention to decency. 5 were followed by re-interment in the same cemeteries and 1 involving the temporary disturbance of another coffin, was followed by re-interment at another Manchester cemetery. Cremated remains were exhumed from a grave in a Manchester cemetery and re-interred in a cemetery outside Manchester.

All the exhumations were carried out in accordance with the conditions imposed in the licences issued by the Home Office or other appropriate authority.

Burial grounds

Housing Site, Palmerston Street, Ancoats

Although not entailing exhumations, preliminary site work in connection with the building of new flats on land in Palmerston Street, Ancoats, disclosed a burial ground. The site believed to have been attached to the Round House, Every Street, Ancoats, formerly a Swedenborgian Chapel, was used between 1820 and 1830 and houses built on the site in 1870 formed a clearance area in 1938 resulting in their demolition. In the circumstances now revealed, the plans for the redevelopment of the area have been altered by the Housing Committee to maintain the particular site of the burial ground as an open space which will be kept by the Parks Committee.

Rusholme Road Cemetery

Under Section 26 of the Manchester Corporation Act, 1954, the ownership of Rusholme Road cemetery was transferred to the Manchester Corporation and in pursuance of Section 28 (2) of the same Act, the City Council published a notice that with effect from 22nd September, 1955, they would commence to remove the tombstones. The site eventually will be maintained as an open space.

PUBLIC CONVENIENCES

Greater progress in the extension of this service has been possible than in former years and new conveniences for both sexes have been opened close to the Lake Entrance, Belle Vue Zoological Gardens, Gorton, replacing those formerly provided in the Gorton Town Hall; at Burnage near the junction of Kingsway with Mauldeth Road; at Chain Bar, Moston, close to the junction of Moston Lane with Victoria Avenue East; at Mundy Street, Longsight, replacing a former public urinal; and a new convenience for females has been opened at Didsbury adjacent to the public library on Wilmslow Road.

The adaptation of the former underground males' convenience at Great Bridgewater Street, close to the Gaumont Cinema, to provide facilities for both sexes was completed and the convenience, which was re-opened in March, 1955, now provides accommodation for females which has long been needed in this busy area.

There are now 158 conveniences with accommodation as shown below :

Males—	
With urinal, watercloset, washing and parcel storage accommodation	5
With urinal, watercloset and washing accommodation	5
With urinal and watercloset accommodation	43
With urinal accommodation	58
	111
Females—	
With watercloset, washing and parcel storage accommodation	4
With watercloset and washing accommodation	4
With watercloset accommodation	39
	47

Renovation and improvement of the males' conveniences at New Cross, Stevenson Square and Shudehill have been carried out and the males' accommodation at All Saints has been increased by two waterclosets. Several of the older urinals have been improved by the replacement of the old and obsolete sanitary-ware with modern fittings and this programme is now approaching completion.

Free handwashing facilities, which are a standard feature of all new conveniences, continue to be provided as circumstances permit at the older premises. All too frequently, however, they are rendered ineffective by the theft of the wash-basin plugs, which, together with other small fittings such as door bolts and coat hooks, disappear at a high rate. Apart from this source of annoyance and expense, serious wilful damage has diminished, but no satisfactory solution has yet been found to defeat the obscene writing and carving on woodwork.

The policy of improving the direction signs on main roads has continued and has gained favourable comment, and the provision of better and bolder signs on the conveniences enables the public to identify and locate the facilities with comparative ease.

Particular attention has been given to precautions against freezing-up in severe wintry weather and the overhaul of plumbing installations, where necessary, to minimize this risk has proved satisfactory.

An essential requirement in the provision of a satisfactory service is the maintenance of a high standard of cleanliness, and the staff of attendants and cleaners carry out this work commendably under somewhat difficult conditions. Much difficulty is experienced in recruiting labour of a suitable type as work of this nature does not attract in these days of full employment.

REPORT OF THE PUBLIC ANALYST

A. N. Leather, B.Sc., F.R.I.C.

In introducing my report on another year's activities, I am conscious of the willing and effective support of all the members of the laboratory staff, and it is with pleasure that I acknowledge helpful co-operation from the sampling officers and other members of the Health Department.

Mr. F. C. Shenton who occupied the position of assistant analyst at the beginning of the year took up the appointment of Deputy County Analyst for Durham at the end of May. His services here had been very valuable. For more than half the year the post of senior assistant analyst has been vacant, and I am grateful to my colleague and deputy, Mr. F. Dixon, upon whom an additional burden has fallen because there is no other qualified and experienced " food and drug " analyst in the laboratory.

From the point of view of legislation relating to food and drugs, the year has been overshadowed by the imminence of a new Food and Drugs Act. Very few new Orders, and very few changes in existing Orders, were made during the year in the general category of Orders governing the composition and labelling of food.

The new Act (a Consolidating Act) was passed during the year under the title of the Food and Drugs Act, 1955, but only came into force on the 1st January, 1956. Certain aspects of the new Act in relation to food standards and labelling are discussed later in this report.

Staff shortage among sampling officers has led to the submission of rather fewer samples than in previous years. Of all samples submitted and examined under the Food and Drugs Act and related Acts, the proportion of samples found to be " adulterated or otherwise giving rise to irregularity " was 5.2 per cent., a figure not very different from those of recent years.

Some notes, principally of analytical interest, are made upon unsatisfactory samples and upon a few samples recorded as genuine. Where it has been possible to indicate subsequent action, such information has been provided by the Medical Officer of Health and by the Sanitary Services Division of the Department.

Food and Drugs Act, 1938

Summary of samples examined

Article	Number examined				Number adulterated or otherwise giving rise to irregularity				Percent age of sample unsats-factory
	Formal	Informal	Private	Total	Formal	Informal	Private	Total	
Milk*	575	622	—	1,197	84	51	—	135	11.3
Milk (sterilized)	106	16	—	122	—	—	—	—	—
Ice cream	9	—	—	9	—	—	—	—	—
Alcoholic liquids—									
Spirits	17	—	—	17	—	—	—	—	—
Wines	6	3	—	9	—	—	—	—	—
Wine cocktails	4	1	—	5	1	—	—	1	20
Others	14	11	—	25	—	—	—	—	—
Arrowroot	—	1	—	1	—	—	—	—	—
Bacon and ham	13	—	—	13	—	—	—	—	—
Baking and golden raising powder	—	6	—	6	—	—	—	—	—
Barley	15	—	—	15	2	—	—	2	13
Biscuits	31	1	—	32	—	—	—	—	—
Blancmange powder	1	4	—	5	—	—	—	—	—
Bottled:—									
Chicken jelly	—	1	—	1	—	—	—	—	—
Mint jelly	—	1	—	1	—	—	—	—	—
Stuffed olives	—	1	—	1	—	—	—	—	—
Bread	13	2	2	17	—	2	1	3	17
Bread, fancy	1	2	—	3	—	—	—	—	—
Butter	31	—	—	31	—	—	—	—	—
Cake and pudding mixtures	—	17	—	17	—	—	—	—	—
Cakes (flour confectionery)	17	8	—	25	—	—	—	—	—
Canned:—									
Cereal products	—	9	—	9	—	—	—	—	—
Cream	—	19	—	19	—	—	—	—	—
Fish	—	12	—	12	—	—	—	—	—
Fruit and fruit juice	—	16	—	16	—	—	—	—	—
Meat and meat products	—	14	—	14	—	—	—	—	—
Soup	—	25	—	25	—	—	—	—	—
Sweet pudding	—	3	—	3	—	—	—	—	—
Vegetable and vegetable products	—	43	—	43	—	—	—	—	—
Celery salt	—	4	—	4	—	—	—	—	—
Cereals (prepared)	14	1	—	15	—	—	—	—	—
Cheese	5	—	—	5	—	—	—	—	—
Cheese spread	—	9	—	9	—	—	—	—	—
Chewing gum	—	1	—	1	—	—	—	—	—
Chocolate cake-icing	—	1	—	1	—	—	—	—	—
Chocolate spread	—	2	—	2	—	—	—	—	—
Christmas pudding	—	2	—	2	—	—	—	—	—
Cocoa	17	—	—	17	—	—	—	—	—
Coconut, desiccated	12	—	—	12	—	—	—	—	—
Coffee	26	—	—	26	—	—	—	—	—
Coffee and chicory	2	1	—	3	—	—	—	—	—
Coffee and chicory essence	—	13	—	13	—	—	—	—	—
Coffee extract, dry	—	2	—	2	—	—	—	—	—
Cornflour	22	—	—	22	—	—	—	—	—
Cream	—	5	—	5	—	—	—	—	—
Custard powder	28	—	—	28	—	—	—	—	—
Dried fruits:—									
Vine fruits	23	—	—	23	1	—	—	1	4.3
Others	39	7	—	46	—	—	—	—	—
Dried herbs	1	5	—	6	—	—	—	—	—
Dried pulses	68	1	—	69	—	—	—	—	—
Dried yeast	1	1	—	2	—	—	—	—	—
Dripping	3	2	—	5	—	—	—	—	—
Fat emulsion	—	1	—	1	—	—	—	—	—
Fish dressing	—	2	—	2	—	—	—	—	—
Fish paste	1	2	—	3	—	—	—	—	—
Flavouring and colouring	—	3	—	3	—	—	—	—	—
Flour, plain	8	1	—	9	—	—	—	—	—
Flour, self-raising	29	1	—	30	—	—	—	—	—
Food beverage powder	6	10	—	16	—	—	—	—	—
Fruit juice	2	2	—	4	1	—	—	1	25
Gelatine	—	1	—	1	—	—	—	—	—
Golden syrup and treacle	—	18	—	18	—	—	—	—	—
Gravy browning	—	11	—	11	—	—	—	—	—
Gravy powder and gravy salt	—	8	—	8	—	—	—	—	—
Ground almonds	3	1	—	4	—	—	—	—	—
Ground rice	3	2	—	5	—	—	—	—	—
Honey	2	6	—	8	—	—	—	—	—
Ice cream mixture	—	1	—	1	—	—	—	—	—
Jelly (table jelly preparations)	4	23	—	27	—	—	—	—	—

Article	Number examined				Number adulterated or otherwise giving rise to irregularity				Percentage of samples unsatisfactory
	Formal	Informal	Private	Total	Formal	Informal	Private	Total	
and cooking fat	38	2	—	40	—	—	—	—	—
onade crystals	—	1	—	1	—	—	—	—	—
on flavoured barley crystals	—	3	—	3	—	—	—	—	—
aroni and vermicelli	7	—	—	7	—	—	—	—	—
ed oatmeal	1	—	—	1	—	—	—	—	—
garine	31	2	—	33	—	—	—	—	—
zipan	—	1	—	1	—	—	—	—	—
t extracts	—	6	—	6	—	—	—	—	—
t products:—									
ack puddings	9	—	—	9	—	—	—	—	—
awn	9	—	—	9	—	—	—	—	—
eat paste	—	3	—	3	—	—	—	—	—
eat pies	—	5	1	6	—	—	1	1	16
inced raw meat	1	—	—	1	—	—	—	—	—
fals (tripe, etc.)	14	—	—	14	—	—	—	—	—
lony and cooked sausages	2	3	—	5	—	—	—	—	—
tted meat	1	1	—	2	1	—	—	1	50
usages	21	—	—	21	1	—	—	1	5
beverage (fluid)	—	1	—	1	—	—	—	—	—
, dried	—	4	—	4	—	—	—	—	—
, evaporated	—	12	—	12	—	—	—	—	—
, sweetened condensed	—	25	—	25	—	—	—	—	—
-brewed condiment	—	5	—	5	—	—	—	—	—
akes	—	2	—	2	—	—	—	—	—
and oatmeal	18	2	—	20	—	—	—	—	—
ut butter	—	3	—	3	—	—	—	—	—
es and chutneys	14	20	—	34	2	2	—	4	12
o crisps	—	1	—	1	—	—	—	—	—
oes, dehydrated	—	1	—	1	—	—	—	—	—
rves	119	5	—	124	—	—	—	—	—
ing, sweet	—	4	—	4	—	—	—	—	—
	31	1	—	32	—	—	—	—	—
butter spread	—	1	—	1	—	—	—	—	—
s	—	1	—	1	—	—	—	—	—
biscuits	—	1	—	1	—	—	—	—	—
	8	1	—	9	—	—	—	—	—
cream and mayonnaise	—	5	—	5	—	—	—	—	—
	—	9	—	9	—	—	—	—	—
wich spread	—	1	—	1	—	—	—	—	—
(other than tomato)	—	23	—	23	—	—	—	—	—
, tomato	—	9	—	9	—	—	—	—	—
lina	15	2	—	17	—	—	—	—	—
nps, prepared	—	1	—	1	—	—	—	—	—
drinks	27	23	—	50	—	3	—	3	6
drink powder	—	6	—	6	—	—	—	—	—
s	4	39	—	43	—	—	—	—	—
ng	—	7	—	7	—	—	—	—	—
shredded	14	2	—	16	—	—	—	—	—
	51	—	—	51	—	—	—	—	—
ts (sugar confectionery)	29	3	—	32	1	1	—	2	6
ca	9	4	—	13	—	—	—	—	—
	35	—	—	35	—	—	—	—	—
gar, distilled	1	—	—	1	—	—	—	—	—
gar, malt	31	1	—	32	—	—	—	—	—
extract	—	1	—	1	—	—	—	—	—
Total foods*	1,712	1,241	3	2,956	94	59	2	155	5.2

* Not including 31 " appeal to cow " samples of milk.

Article	Number examined				Number adulterated or otherwise giving rise to irregularity				Percen age of sample unsat factor
	Formal	Informal	Private	Total	Formal	Informal	Private	Total	
Aspirin tablets	2	3	—	5	—	—	—	—	—
Bicarbonate of soda	1	2	—	3	—	—	—	—	—
Blackcurrant juice	—	1	—	1	—	—	—	—	—
Blackcurrant pastilles (iodised)	—	1	—	1	—	—	—	—	—
Calamine lotion	—	1	—	1	—	—	—	—	—
Calcium lactate tablets	—	1	—	1	—	—	—	—	—
Cascara sagrada tablets	1	—	—	1	—	—	—	—	—
Compound glycerine of thymol	—	1	—	1	—	—	—	—	—
Cough mixtures	1	10	—	11	—	—	—	—	—
Cream of tartar	—	1	—	1	—	—	—	—	—
Digestive tablets	—	4	—	4	—	—	—	—	—
Epsom salts	—	1	—	1	—	—	—	—	—
Eye lotion	—	1	—	1	—	—	—	—	—
Fluid magnesia	—	3	—	3	—	—	—	—	—
Friars balsam	—	1	—	1	—	—	—	—	—
Gee's linctus	—	2	—	2	—	—	—	—	—
Glauber's salt	1	—	—	1	—	—	—	—	—
Glycerine	3	—	—	3	—	—	—	—	—
Herbs, mixed medicinal	—	1	—	1	—	—	—	—	—
Hydrogen peroxide	—	1	—	1	—	—	—	—	—
Indigestion mixture	—	1	—	1	—	—	—	—	—
Infants' cordial	—	2	—	2	—	—	—	—	—
Influenza mixture	—	2	—	2	—	1	—	1	50
Liquid paraffin	2	2	—	4	—	—	—	—	—
Malt extract with cod liver oil	—	1	—	1	—	—	—	—	—
Medicated tablets	—	3	—	3	—	—	—	—	—
Medicated sweets	—	4	—	4	—	—	—	—	—
Oil:—									
Camphorated	1	2	—	3	—	—	—	—	—
Cod liver	—	1	—	1	—	—	—	—	—
Neatsfoot	—	1	—	1	—	—	—	—	—
Olive	4	2	—	6	—	—	—	—	—
Olive oil and raspberry vinegar	—	1	—	1	—	—	—	—	—
Oil of wintergreen	—	1	—	1	—	—	—	—	—
Parrish's chemical food	1	—	—	1	—	—	—	—	—
Quinine tonic water	—	1	—	1	—	—	—	—	—
Rose hip syrup	—	1	—	1	—	—	—	—	—
Saline, effervescent	—	2	—	2	—	—	—	—	—
Saline, non-effervescent	—	1	—	1	—	—	—	—	—
Seidlitz powders	—	1	—	1	—	—	—	—	—
Syrup of figs	—	1	—	1	—	—	—	—	—
Teething powder	1	—	—	1	1	—	—	1	100
Tincture of iodine	—	1	—	1	—	—	—	—	—
Yeast tablets	—	2	—	2	—	—	—	—	—
Vitamin tonic	—	1	—	1	—	—	—	—	—
Total drugs	18	69	—	87	1	1	—	2	2.2
Add total foods*	1,712	1,241	3	2,956	94	59	2	155	5.2
Total foods and drugs*	1,730	1,310	3	3,043	95	60	2	157	5.2
All milk (including sterilized milk)*	681	638	—	1,319	84	51	—	135	10.2

* Not including 31 "appeal to cow" samples of milk.

Composition of milk

The average values for the percentage content of fat and non-fatty solids for the four quarters and for the whole year are set out in tabular form.

Quarterly average table

Quarter	All milks				Genuine milks				Adulterated milks			
	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %
irst	412	8·67	3·46	12·13	366	8·73	3·53	12·26	46	8·22	2·86	11·08
econd ..	392	8·73	3·39	12·12	353	8·76	3·46	12·22	39	8·46	2·74	11·20
hird ..	245	8·73	3·53	12·26	221	8·78	3 61	12·39	24	8·32	2·79	11·11
ourth ..	270	8·72	3·63	12·35	244	8·81	3·72	12·53	26	7·88	2·75	10·63

Annual average table

Year	All milks				Genuine milks				Adulterated milks			
	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %
1955	1,319	8·71	3·49	12·20	1,184	8·76	3·57	12·33	135	8·24	2·79	11·03

Adulteration of milk

During and since the last great war, an increasing number of food standards came into force in the form of Food Standards Orders. In general these have now been sanctioned for the first time by permanent legislation, namely by the Food and Drugs Act, 1955. A comment on legal policy regarding standards appears later in this report. Food Standards Orders in general lay down definite or " absolute " standards of composition.

Milk was one of the earliest foods for which any kind of standard was deemed to be necessary. From the first, the kind of standard differed in principle from the " absolute " standards mentioned above. Milk was and is judged by a presumptive standard. Where in milk the fat content falls below 3·0 per cent. it may be presumed, until the contrary is proved, that the milk has been adulterated (by skimming or watering), and where the non-fatty solids content falls below 8·5 per cent. it may be presumed, until the contrary is proved, that the milk has been adulterated (by watering). This is the substance of the Sale of Milk Regulations, 1901; unchanged by the Sale of Milk Regulations, 1939; and still in force.

Legally the onus of proof that any milk falling below the " presumptive " standards has not been watered or skimmed is laid upon the vendor, who may require corresponding samples to be taken from supplies about to be delivered to him, and this chain may be continued back to the farmer who may require samples to be taken from the yield of his cows. In practice farmers rarely take the initiative in requiring " appeal to cow " samples to be taken, but in appropriate instances sampling officers (with the consent of the Food and Drugs Authority concerned) visit farmers and give them the opportunity of allowing samples to be taken. It is often possible to obviate the necessity for these journeys to the farm (journeys which might amount to hundreds of miles) by the application of the freezing point test. As the result of this test it is often possible to form the opinion that a sample of milk containing less than the presumptive minimum percentage of non-fatty solids has not been adulterated by watering but has come from a cow or cows yielding naturally poor milk. Naturally poor milk is thus differentiated from watered milk.

Samples adjudged by the freezing-point test to be free from added water

The following samples of milk showed figures for non-fatty solids below the presumptive limit of 8·5 per cent. non-fatty solids fixed by the Sale of Milk Regulations, 1939, but were adjudged genuine (apart from any deficiency in fat) on the Hortvet freezing-point test:—

Serial number	Total solids per cent.	Fat per cent.	Non-fatty solids per cent.	Freezing point °C. (Hortvet)	Acidity °Richmond
505B	11·49	3·25	8·24	—0·539	14
510B	11·05	2·80	8·25	—0·536	15
511B	11·18	2·70	8·48	—0·538	16
31A	11·08	3·10	7·98	—0·536	15
34A	11·71	3·30	8·41	—0·538	17
35A	11·70	3·35	8·35	—0·539	17
1074c	11·03	2·75	8·28	—0·541	15
1076c	10·92	2·65	8·27	—0·543	15
1078c	10·93	2·65	8·28	—0·546	16
1079c	11·24	2·90	8·34	—0·534	16
1082c	10·87	2·75	8·12	—0·533	15
597B	11·46	3·25	8·21	—0·546	14
598B	10·68	2·65	8·03	—0·547	14
599B	10·48	2·45	8·03	—0·543	13
602B	11·96	3·60	8·36	—0·549	16
603B	11·32	2·95	8·37	—0·546	16
604B	11·13	2·90	8·23	—0·555	19
605B	11·40	3·00	8·40	—0·554	17
606B	10·64	2·25	8·39	—0·557	19
1102c	11·35	3·20	8·15	—0·547	18
1103c	11·47	3·40	8·07	—0·544	18
1104c	10·65	2·70	7·95	—0·545	19
1106c	11·08	2·75	8·33	—0·543	16
1107c	11·20	2·75	8·45	—0·543	18
1108c	11·03	2·80	8·23	—0·537	16
116A	11·22	3·00	8·22	—0·542	20
1127c	11·96	3·60	8·36	—0·548	15
142A	11·06	2·95	8·11	—0·546	17
144A	11·64	3·40	8·24	—0·541	17
685B	11·48	3·15	8·33	—0·538	15
1179c	11·17	2·70	8·47	—0·542	18
752B	11·96	3·75	8·21	—0·539	16
753B	12·06	3·85	8·21	—0·534	15
754B	11·10	2·90	8·20	—0·545	15
1204c	11·31	3·03	8·28	—0·539	16
1206c	11·42	3·01	8·41	—0·536	15
1211c	11·45	3·10	8·35	—0·546	16
244A	11·19	2·90	8·29	—0·536	17
769B	11·79	3·35	8·44	—0·542	17
1243c	12·18	3·90	8·28	—0·542	14
1244c	11·41	3·15	8·26	—0·543	15
1245c	11·00	3·00	8·00	—0·544	15
1252c	11·19	3·10	8·09	—0·548	15
1275c	11·17	2·70	8·47	—0·549	17
1282c	11·09	2·80	8·29	—0·551	17
325A	11·58	3·25	8·33	—0·537	17
327A	11·57	3·35	8·22	—0·549	15
328A	11·08	2·95	8·13	—0·545	16
330A	11·24	3·05	8·19	—0·538	15
1315c	11·32	3·05	8·27	—0·546	15
1320c	11·50	3·10	8·40	—0·530	17
1322c	10·89	2·80	8·09	—0·542	17
1323c	11·06	3·00	8·06	—0·535	15
345A	10·81	2·55	8·26	—0·546	16
347A	11·04	2·55	8·49	—0·546	15
856B	11·44	3·15	8·29	—0·536	19
857B	11·11	2·95	8·16	—0·535	18
1341c	11·96	3·70	8·26	—0·536	19
1342c	11·98	3·80	8·18	—0·546	19
1343c	12·46	4·15	8·31	—0·548	18
1344c	11·17	2·80	8·37	—0·548	17
1345c	11·42	3·20	8·22	—0·548	18
1347c	10·72	2·65	8·07	—0·547	17
383A	11·49	3·25	8·24	—0·541	17
384A	11·40	3·10	8·30	—0·543	17
385A	11·06	2·95	8·11	—0·538	18
386A	11·79	3·50	8·29	—0·537	18
1366c	11·38	3·15	8·23	—0·546	18
1368c	10·72	2·60	8·12	—0·542	16
1369c	10·56	2·40	8·16	—0·539	16
1370c	10·94	2·80	8·14	—0·542	17
1371c	11·32	3·00	8·32	—0·541	18
1372c	11·48	3·10	8·38	—0·539	19
435A	11·62	3·30	8·32	—0·531	18
1397c	11·26	3·00	8·26	—0·535	17
1422c	10·55	2·20	8·35	—0·548	17

Serial number	Total solids per cent.	Fat per cent.	Non-fatty solids per cent.	Freezing point °C. (Hortvet)	Acidity °Richmond
467A	11·34	3·00	8·34	—0·542	17
1493C	11·83	3·50	8·33	—0·547	17
1494C	11·07	2·75	8·32	—0·545	18
1512C	11·14	2·75	8·39	—0·553	17
1301C	11·59	3·20	8·39	—0·545	17
1077B	11·10	2·75	8·35	—0·548	18
558A	11·41	3·00	8·41	—0·547	16
560A	11·01	2·70	8·31	—0·545	16
620A	11·60	3·45	8·15	—0·545	16
622A	10·89	2·60	8·29	—0·542	16
675A	11·16	2·75	8·41	—0·547	17
1228B	11·42	3·10	8·32	—0·548	17
1229B	11·10	2·75	8·35	—0·543	17
871A	11·39	3·00	8·39	—0·552	16
1364B	11·57	3·40	8·17	—0·543	15
1365B	11·18	2·95	8·23	—0·541	15
885A	11·31	3·05	8·26	—0·545	17
886A	11·88	3·40	8·48	—0·546	17
887A	11·17	2·95	8·22	—0·545	15
889A	11·58	3·25	8·33	—0·542	16
890A	11·01	2.80	8·21	—0·550	16
1428B	11·26	3·20	8·06	—0·530	12
1493B	11·58	3·40	8·18	—0·532	15
1014A	11·20	3·00	8·20	—0·545	17
1034A	11·18	2·80	8·38	—0·540	17
1035A	11·16	2·75	8·41	—0·544	17
1048A	11·44	3·10	8·34	—0·539	17
1051A	11·26	2·85	8·41	—0·549	16
ppeal to cow " samples:					
1115C	11·12	3·00	8·12	—0·533	16
1116C	11·17	2·91	8·26	—0·542	16
1298B	11·16	2·79	8·37	—0·549	17

But for the freezing-point test, 104 samples of milk appearing in the foregoing able (not including the " appeal to cow " samples) might have been ‘ presumed " to contain extraneous water. As a result of the test, the cause f the poor quality of each of these milks (in respect of non-fatty solids) has een presumed to be a natural cause such as under-nutrition of cows, errors n cow-keeping, or hereditary tendency in cows to yield milk with low non-fatty olids. To the extent that the onus of proof has been partly borne by the aboratory instead of by the farmer, it may be said that this work is in the armer's favour. But the question might be argued whether it is in the public nterest.

For some time now, there have been protagonists of the view that there hould be an " absolute " standard for milk as well as for other foods. In this iew, milk which falls below the absolute standard should not be offered for uman consumption, but other uses should be found for it (for example, it ight produce good cheese). This view may be taken as a principle sufficient n itself, or it may be combined with the often expressed opinion that farmers hould be paid more than the standard price for richer milk according to a raduated scale. At present there seems to be no incentive for producing milk apart from milk bearing special names such as Channel Island milk) above a ertain minimum quality. The only incentive is to produce quantity.

dded water

During the year under review the total number of milk samples showing ss than 8·5 per cent. of non-fatty solids was 138. The freezing-point test ndicated that 104 of these milks were not adulterated with water, but were aturally poor. The remaining 34 samples low in non-fatty solids contained dded water in amounts ranging from a trace to 20·2 per cent.

Deficiency in fat

The total number of milk samples showing less than 3·0 per cent. of fat was 101. Of these samples, 77 represented milk arriving in churns at dairies, and formed parts of 44 different consignments in each of which the average fat content was 3·0 per cent. or over.

> [Legal proceedings were instituted in respect of 18 samples of milk, and in respect of 3 samples the case was dismissed. In all other instances penalties were inflicted, and these amounted to totals of £37 in fines and £16 5s. in costs. In respect of other unsatisfactory milk samples, it was deemed appropriate to administer cautions.]

Adulteration of food (other than milk) and drugs

In the table which follows immediately are set out the samples found to be adulterated or unsatisfactory, and in summarized form the nature of any subsequent action taken in respect of each such sample.

Following the table are detailed notes on matters of interest arising from the examination of these samples.

Samples other than milk

Adulterated and other unsatisfactory samples and action taken

Informal samples				Article	Formal samples		
Adulterated or unsatisfactory	Cautioned	Formal samples unobtainable	Referred for action to other local authority		Adulterated or unsatisfactory	Cautioned	Further samples taken and found satisfactory
—	—	—	—	Alcoholic liquids— Wine cocktail	1	1	—
—	—	—	—	Barley	2	2	—
2	2	—	—	Bread	—	—	—
1 (P)	—	—	1	Bread (P)	—	—	—
—	—	—	—	Dried fruit	1	—	1
—	—	—	—	Fruit juice	1	1	—
1 (P)	1	—	—	Meat pie (P)	—	—	—
—	—	—	—	Potted meat	1	1	—
—	—	—	—	Sausage	1	1	—
1	1	—	—	Pickles..	3	3	—
3	3	—	—	Soft drink	—	—	—
1	—	1	1	Sugar confectionery	1	1	—
1	1	—	—	Infants' cordial	—	—	—
—	—	—	—	Teething powders	1	1	—

(P) Samples submitted as "private," but subsequent action taken by the Sanitary Services Division.

Some notes on particular cases of adulteration or irregularity

In order to assist cross reference between the following notes and the " Summary of samples examined," each sample is introduced by the heading under which it was classified in that table, then is given the name under which it was submitted.

Alcoholic liquids—wine cocktail (formal). The bottle from which this sample was procured bore a label with a statement in the form required by the Labelling of Food Order, 1953. The actual declaration was " Not less than 35 per cent. proof spirit," but the sample was found to have an alcoholic strength of only 32·5 per cent. proof spirit. The deficiency expressed as a proportion of the declared strength was 7·1 per cent.

> [The sampling officer visited the firm of blenders and bottlers who were responsible for the label. They blamed the low alcoholic strength of an imported wine, and wrote to the Medical Officer of Health undertaking to withdraw all similar stocks from sale. The firm was cautioned.]

Barley (formal). A sample was submitted in a paper envelope, labelled and sealed in the usual way, and on receipt it was stored in a steel cupboard. On examination, the sample was found to contain the excreta of mice. The whole sample weighed about five ounces and contained eight pellets of excrement. On microscopic examination, many typical rodent hairs were recognised. The sample was deemed to be unfit for human consumption.

> [Remaining stocks of barley were destroyed, and the shop and a warehouse were disinfested. The vendor was cautioned.]

Barley (formal). This sample of prepared (" pearl ") barley contained about 0·05 per cent. of dust. The proportion of dust was not abnormal, but the dust was very badly infested with mites. The whole sample had, to a slight degree, the characteristic odour of mites.

> [Remaining stocks were withdrawn from sale.]

Bread (private). A complainant personally submitted at the laboratory about half a slice of white bread which had been " buttered " and spread with marmalade. It was stated to be part of a proprietary wrapped sliced loaf, and the complainant desired any further action to be taken by the Health Department. Deeply embedded in the crust of the bread was an apparently complete beetle nearly half an inch long. I formed the opinion that the beetle must have become embedded in the dough before it was baked. The insect was sent to the Department of Entomology, Manchester Museum, and was identified by Mr. S. Shaw as a beetle " Tenebroides mauritanicus, commonly associated with flour and stored products."

> [Infestation was traced to certain flour stocks outside the City. The medical officer of health of the local authority concerned was notified.]

Bread (informal). This sample consisted of almost a complete loaf of a proprietary brown bread, and was submitted for the investigation of a complaint by the purchaser that a beetle was present in the bread. Embedded in the crumb of the loaf, and already exposed by normal slicing of the bread, was a small brown insect which appeared to have been cut by the bread-knife. The insect must have been present in the dough before baking. The parts of the insect were sent to the Department of Entomology, Manchester Museum, and were identified by Mr. S. Shaw as a beetle " Gnathocerus cornutus, commonly associated with flour and stored products." A search through the rest of the sample of bread revealed no further insects or insect parts.

> [The vendor was cautioned. It was stated that three separate bakers supplied similar bread to the vendor, and he was unable to state who was the supplier of the loaf in question.]

Bread (informal). The sample consisted of a portion of a loaf of a proprietary brown bread, together with part of a slice which had been " buttered." The sample was submitted for the investigation of a complaint that mouse excrement was visibly embedded in the cut slice. A blackish spot in the cut slice was examined and the opinion was formed that the spot did not consist of mouse excrement. Microscopically the substance of the spot resembled the rest of the bread, but had been stained with foreign matter containing traces of iron and resembling dirty matter from a machine bearing. No similar spots were found in any other part of the sample. Though not upholding the actual complaint, the results of the examination led to the classification of the sample as unsatisfactory.

> [The baker was traced, a visit was made, and the bakery manager was cautioned on the necessity of taking precautions to prevent contamination of the bread.]

Dried fruits—vine fruits (stoned raisins, formal). On analysis a sample was found to contain mineral oil to the extent of 0·87 per cent. The Mineral Oil in Food (Amendment) Order, 1950, permitted the addition of mineral oil to raisins in a proportion not exceeding 1 per cent. The Mineral Oil in Food (Amendment) Order, 1952, reduced the permitted proportion of mineral oil in raisins to an amount not exceeding 0·5 per cent. Since mineral oil is applied to the surface of the dried fruit, there must be some probability of unevenness of distribution. For this reason a further formal sample was requested from the same supplier. A further formal sample was submitted and was found to contain only 0.29 per cent. of mineral oil.

> [No further action was deemed to be necessary.]

Fruit juice (blackcurrant juice, formal). A sample was found to contain vitamin C in an amount agreeing with the declaration on the label (55 mg. per 100 gm.), and also to contain sulphur dioxide in an amount not exceeding that permitted by the Public Health (Preservatives, etc., in Food) Regulations (350 parts SO_2 per million). In these respects the sample was satisfactory in composition. The manufacturer's printed label, affixed to the bottle in which the product was sold, included the following words " Contains . . . not more than 0·35 per cent. Sulphur Dioxide." This obviously should read "Contains not more than 0·035 per cent. Sulphur Dioxide." It appeared most likely that a printer's error had passed unnoticed, and that the manufacturer would be anxious to correct it. (350 parts per million = 0·035 per cent.)

> [The manufacturer undertook to have his stocks relabelled.]

Meat products—meat pie (private). A sample was sent privately by a purchaser with a request to " deal with the matter or direct it into the proper channels." The purchaser complained of the presence of foreign matter. The pie crust had been much broken before receipt, but it was possible to see that the pie had been rather elongated in shape, measuring about five inches by three inches. A blackish object was embedded in the filling which consisted of finely minced meat of a pasty consistency. After removal and separation from adherent matter, the object was seen to be an orderly bundle of black bristles bound together at one end by a glue-like adhesive. It was apparent that such a bundle of bristles could have come from a small brush. The longest bristles were about five-eights of an inch long. The weight of the bundle was only one-fifth of a grain. Microscopically the bristles were seen to be animal hairs.

> [The bakery was visited, and the actual source of the bristles was traced to a brush used for greasing tins. A caution was issued.]

Meat products—potted meat (formal). An " open product " sold as " potted meat " was found to consist of meat paste containing 74 per cent. of meat. The Food Standards (Meat Paste) Order requires not less than 55 per cent. of meat in meat paste. Though the sample was considered to be a good quality meat paste, it could not lawfully be described as " potted meat."

> [A cautionary letter was sent to the manufacturers. The correct description was applied in connection with later sales.]

Meat products—sausages (formal). For many years sulphur dioxide has been permitted in sausages to the extent of 450 parts per million, provided that the presence of preservative is declared at the time of sale—Public Health (Preservatives, etc., in Food) Regulations, 1925, etc. The declaration may be printed upon a band or wrapper placed upon the sausages, or may be displayed as a public notice in the shop where they are sold. Most sausages offered for sale do in fact contain sulphur dioxide. The present sample contained a comparatively small proportion, namely 90 parts per million of sulphur dioxide, and the only irregularity was that the declaration was omitted.

> [The vendor was cautioned.]

Pickles (two formal, two informal). These four samples were all prepacked and labelled by the respective manufacturers. The informal samples were submitted in the original labelled containers and the formal samples were accompanied by specimens of the labelled containers in which they had been purchased. To comply with the Labelling of Food Order it is necessary to declare the ingredients " in the order of the proportion in which they were used, the ingredient used in the greater proportion (by weight) being specified first." In every instance there was a failure to comply with the labelling requirements in respect of the order in which the ingredients were specified. Beside the major ingredient (onions in three samples and red cabbage in the other) the following ingredients were stated in various orders: malt vinegar, solution of acetic acid, salt, caramel. One labelling error was the omission of salt, and others were the declaration of salt or of caramel too early in the list.

> [When sampling officers visited the pickle factory following purchases of two different products in different areas of the City, they found that the packers were already aware of the error in labelling and had already obtained new and satisfactory labels. The explanation of the error on the former labels was that a printer had on his own initiative altered the order of the words in the statement of ingredients so as to improve the neatness and balance of the printing. Other manufacturers were reminded by letter of the provisions of the Labelling of Food Order, and were requested to provide new labels and to submit copies to the Health Department.]

Soft drinks (fresh orange drink, informal). A sample was submitted to investigate a consumer's complaint that a faint flavour of " detergent " was present. No detergent could be detected by analysis and yet it was agreed after tasting that a very faint taint was present. A further sample, taken as control, had the normal taste of an orange drink, and a later sample of the product was also free from the taint of detergent.

> [The maker of the drink was cautioned and informed of the necessity for extra precautions to remove any traces of detergent from the bottles after washing.]

Soft drinks (mineral water, informal). A sample had been purchased by a consumer as " limeade " and was submitted to the Health Department with a complaint that it had a " taste of paraffin." The sample was contained in a bottle of about 26 fluid ounces capacity, but the bottle was rather less than half-full when received in the laboratory, and the contents had lost any effervescent properties they might have possessed. The closure of the bottle was a porcelain stopper with a rubber ring, the porcelain being permanently attached to the bottle by an arrangement of wires. Tasting tests in the laboratory confirmed the presence of a taint in the sample. The taint was traced principally to the rubber ring which even after rinsing with water was capable of causing a taint in clean water in a separate vessel. The taint strongly resembled " petrol " (motor spirit).

> [A cautionary letter was sent to the manufacturer, who undertook to carry out additional systematic examination of stoppers from returned bottles.]

Soft drink (informal). This sample was submitted in consequence of a purchaser's complaint that a foreign body was visible in the fluid. The product had only a non-descriptive proprietary name. The sample consisted of an unopened bottle and its contents. The bottle was of a proprietary design and was closed with a " crown cork." On opening, normal effervescence occurred in the fluid. The contents of the bottle (apart from the foreign body) were found to be of normal composition for a soft drink for consumption without dilution. The foreign body was found to be a beetle about half an inch long, together with a mass of mould mycelium in which it was embedded. From marks inside the bottle, it was clear that the mouldy mass including the beetle had earlier been adherent to the edge of the base of the bottle, and therefore that the presence of the foreign matter was due to failure in bottle-washing and in the inspection of " washed " bottles. The sample was regarded as unfit for human consumption.

> [After being cautioned, the manufacturer undertook to improve supervision of washed bottles.]

Sweets—sugar confectionery ("·buttered fruits," formal). The jar from which these sweets were sold had a label bearing the words " made with real butter." The sweets were almost spherical and individually wrapped, and were found to be of two kinds. About two-thirds of the sweets had a soft centre containing fruit. About one-third of the sweets had no fruit in the centre and these sweets were entirely composed of toffee. The toffee coating from the fruit sweets accounted for about two-thirds of the total weight of each sweet, while the fruit centre accounted for about one-third. The total percentage of fat in the toffee coating was only 3·6. In those sweets consisting entirely of toffee, the total percentage of fat was again only 3·6. In either case the fat present contained less than half its weight of butter fat. The product clearly failed to comply with the Code of Practice agreed between the Ministry of Food and the trade (Use of the word " Butter " in the Description of Confectionery Circular MF 21/51. In this Code of Practice it is agreed that a product in whose description the word " butter " is used shall contain not less than four per cent. of butter fat). The opinion was also expressed that the name " buttered fruits " was unsatisfactory for a mixture of sweets only some of which contained fruit centres.

> [After being cautioned by letter, the manufacturers undertook to withdraw from sale all existing stocks, and to prevent future labelling errors of this kind.]

Sweets—sugar confectionery (" chocolate," informal). This specimen (said to have been purchased in Manchester) was submitted to investigate a purchaser's complaint forwarded from another area. The article consisted of a sweetmeat, resembling a block of milk chocolate in appearance, wrapped in metal foil, and further wrapped in a blue paper bearing the printed words " FULL CREAM MILK BLOCK." The original wrapping had been opened, and some of the contents removed. The complaint was that a living grub had been found upon the block.

On examination of the block and wrappings a living larva was found about a quarter of an inch long. A small quantity of webbing, and also particles resembling excreta, were found upon the sweetmeat. The larva has been identified by Mr. S. Shaw, of the Department of Entomology, Manchester Museum, as that of the " cacao moth," an infestant of cocoa and other products.

> [When the shop was visited the product was temporarily sold out. Later when a further quantity was delivered the sampling officer found no sign of infestation. Information was sent to the medical officer of health for the area in which the sweetmeat was manufactured.]

Drugs

Infants' cordial (formal). This sample was submitted in the packers' original nominally one-ounce bottle bearing a printed label giving the name and address of the packers. The bottle was about half full on receipt, and was submitted with a request to test for the presence of morphine. No morphine was found. The wording on the label included the following :— " OBSERVE—In severe cases of Wind, Spasm and Griping Pains, the dose may be increased with safety." These words might be held to bring the " Infants' Cordial " within the definition of a " substance recommended as a medicine " for the purposes of the Pharmacy and Medicines Act, 1941. If so, then the label ought to include a statement of the " active ingredients " and the " appropriate quantitative particulars."

> [The packer was cautioned, and he stated that the bottles would be re-labelled.]

Teething powders (formal). Following a complaint from a Manchester hospital that illness in a child might be attributable to teething powders containing calomel (mercurous chloride), a sampling officer found that the implicated brand was in fact on sale, and that the wrapper clearly declared the presence of 33⅓ per cent of calomel. This declaration was very closely confirmed by analysis.

> [The Medical Officer of Health communicated with the firm of pharmaceutical manufacturers who had made and packed the powders, and received their assurance that no further similar powders would be sold and that other stocks would be recalled.]

Notes on some samples of food which, though not classified as "adulterated or otherwise giving rise to irregularity," raised some points of analytical or administrative interest

Flour (informal). A nominally 1 lb. bag of flour, partly used, was submitted for the investigation of a complaint by a housewife that the flour contained a dead mouse. After washing the foreign body free from the strongly adherent flour, it was found to consist entirely of a scrap of ordinary lean " butcher's meat." By chance there was an elongated appendage to the piece of meat simulating a tail. The meat itself showed little sign of even incipient putrefaction and it could not have been left in the flour for more than a very few days. It would appear likely that its presence in the flour was due to some oversight when the flour was being used in domestic cookery.

> [On visiting the house, the sampling officer elicited the information that a meat pie had been made, and pieces of meat had been rolled in flour before being cooked for the pie.]

Rye crispbread (informal). The sample was submitted as a result of a complaint from an invalid that the product contained too many coarse particles such as husks and unground grains. The product consisted of brittle rectangular " biscuits " or flat cakes about 4½ in. by 3 in. and rather less than ⅛ in. in thickness. On a portion of the sample the proportion of coarse particles was found to be approximately 1·1 per cent. Some unground grains were present in the sample, on the average not more than one such grain being present in two of the cakes of " crispbread." The product appeared to be deliberately made from coarsely ground rye, and it might have been unsuitable to a person with impaired digestion. Although coarse particles were present in the sample as stated by the complainant, the product was regarded as a " genuine " foodstuff of its particular class.

Pork pie (informal). This sample was submitted to investigate a purchaser's complaint that the jelly inside the pie contained many specks of " dirt." The sample consisted only of some portions of pie crust with adhering jelly. On examination, the jelly was seen to contain numerous dark particles, which appeared very conspicuous against the pale inside of the crust. These were recognised microscopically as particles of spices, principally very coarse black pepper. No foreign or dirty matter was seen.

Margarine (informal). A sampling officer was requested, for the information of a purchasing department, to obtain a sample of margarine as delivered at an institution. The sample was examined in relation to the Food Standards (Margarine) Order, 1954 (S.I. 1954 No. 613). The determination of vitamin A was carried out as described in the Second Schedule of the Order, and the quantity of vitamin A found was not in accordance with the standard set out in the First Schedule of the Order. (The standard is 760 International Units per ounce, but the sample contained less than 200 I.U. per oz.). Article 4 of the Order states, " The standard prescribed by this Order shall apply only as respects sales by retail." A definition of " sale by retail " appears in Article 2 of the Order.

> [A legal opinion was to the effect that the sale of the margarine had not been a " sale by retail " as defined. The purchasing department was accordingly advised to amend the terms of future contracts to include a specification for the quality of margarine required.]

The Food and Drugs Act, 1955

A comment was made in this report last year upon the effect of the Food and Drugs Amendment Act, 1954. The appointed day for the coming into operation of the Amendment Act was later announced to be the 1st January, 1956. Before that appointed day a consolidating Act was passed under the title of the Food and Drugs Act, 1955. This last Act consisted in effect of the unchanged portions of the 1938 Act together with all the changes and additions introduced by the Amendment Act. The new Act repeals all prior legislation on the 1st January, 1956, and itself comes into operation on that day.

The Act in force during the whole of the year under review has been the Food and Drugs Act, 1938.

As explained last year, there are, apart from the Act itself, many Regulations and Orders which are concerned with the composition and labelling of food. It may be of interest, therefore, to consider those Regulations and Orders which were made under powers conferred by Defence Regulations during the war of 1939. Since the termination of the Defence Regulations themselves, powers to continue or vary the Food Standards Orders and the Labelling of Food Order have been conferred by special year-by-year legislation, and, apart from some new Food Standards Orders and some amendments, the general body of Orders governing the labelling and composition of food remains the same as it was at the end of the war. This describes the state of affairs up to the end of 1955. What is to happen to these Orders after the 1st January, 1956 ?

Section 136 of the 1955 Act, and the Twelfth Schedule to that Act, provide the answer. The Schedule begins thus:

> "Any regulations which, immediately before the commencement of this Act, were in force under any enactment repealed by this Act (whether made under that enactment or under an earlier enactment replaced thereby) shall continue in force, and shall have effect, as regulations made under the corresponding provision of this Act; and references in this Act to regulations made thereunder shall be construed accordingly."

Thus, in an extremely incidental and inconspicuous manner, a very definite landmark has been reached in the food laws of this country, in so far as, for the first time, *permanent* legal backing has been provided for those numerous Orders introduced during the second great war for the purpose of controlling the composition and labelling of food. The procedure makes a welcome contrast to the action following the 1914–18 war whereby a few useful food standards were allowed automatically to cease when all the other provisions of the Defence of the Realm Act came to an end.

The 1938 and earlier Food and Drugs Acts contained in themselves sections governing the composition of butter and margarine and the labelling of margarine. The new Act does not contain comparable sections. This change was intended to permit the composition of butter and margarine and the labelling of margarine to be governed in a similar way as the composition and labelling of other food. Accordingly for the sake of uniformity the Food Standards (Butter and Margarine) Regulations, 1955, and the Labelling of Food Amendment Regulations, 1955 (which treat of the labelling of margarine), have been made and came into force on the 1st January, 1956.

Drinking water and other water samples

The water samples examined during the year may be classified thus:—

Samples taken to investigate complaints		33
Routine samples and checks on previous complaints		9
Miscellaneous samples:	Drinking waters	7
	Other than drinking water	1
	Total number of samples	50

The public analyst's laboratory is only concerned with the public health aspect of water supply from the chemical point of view, and the " wholesomeness " of the water is the primary consideration. The corresponding responsibility from the bacteriological point of view is borne by the Regional Public Health Laboratory. These laboratories collaborate by supplying each other with such information as may be of mutual assistance.

From the point of view of water-engineering and the supply of pure water, analyses of drinking water are also carried out in the Waterworks Department Laboratory. It is gratifying to record that very helpful relations exist between the waterworks' and public analyst's laboratories.

It will be observed from the table that the investigation of complaints has been a major consideration in selecting the samples to be submitted to the public analyst's laboratory. In some instances the Waterworks Department had been notified of the nature of the complaint before the sample was taken, and that Department may already have taken steps to deal with the condition complained of.

Complaints included the following, that the water was dirty or discoloured or deposited a sediment, or that it had an offensive taste, or that it contained " insects." (By " insects " are usually meant water-fleas, which of course are not properly classified as insects but are popularly referred to as such). Complaints of " insects " accounted for half the total complaints. The condition of the water at the time of sampling fully justified 4 complaints and lent some support (often only slight) for a further 11 complaints. In 18 instances there was nothing in the water when sampled to lend any support to the complaint.

For the first time, water from the Haweswater scheme came into ordinary service during the year. When random samples are taken or when complaints are investigated at widely separated points within the City boundary, it is not always practicable to determine the primary source of the water being supplied. It may be mentioned that some of the clearest, brightest and most colourless water recorded in the laboratory has appeared in samples during the year.

The miscellaneous samples included 4 taken in connection with a proposed alternative water supply for Langho Colony. These specimens were typical peaty moorland waters often with a strong yellow colour and having a not entirely negligible solvent action on lead pipes.

An opinion was given to the British Electricity Authority on the potability of a well-water at a point where workmen were at some distance from the public supply.

The Housing Department was advised that a sample of ground water from a housing site was likely to cause some deterioration of Portland cement.

Two samples from the drinking water tanks of a ship in the Port of Manchester were of great chemical purity.

Samples submitted by the Health Department

Investigation of suspected food-poisoning. As a complement to bacteriological investigation carried out at the Regional Public Health Laboratory, tests for chemical poisons have been made, in each case with negative results, on the following samples ; canned beans, cake, fruit crush, canned soup, canned apricots, canned peaches. Where complaints had been made that certain foods had caused vomiting, the following findings were reported: evidence of moth infestation in chocolates, small proportion of detergent in milk.

Samples submitted by other Corporation departments

(*a*) Parks and Cemeteries Department. The duties of the Manchester County Borough under the Fertilizers and Feeding Stuffs Act have been delegated by the City Council to the Parks and Cemeteries Committee. Eleven fertilizers were submitted. These were: four compound fertilizers, two bone meals, two hoof and horn meals, sulphate of potash, hydrated lime and waste lime.

The results of analysis were compared with the statutory statements. Analysis of the four compound fertilizers agreed fully, or only narrowly failed to agree, with the respective statements. Agreement was also found for one bone meal and two hoof and horn meals, while one bone meal had an incorrect statement. The statement for sulphate of potash was correct, while those for the two kinds of lime were unsatisfactory but not seriously so.

(*b*) Markets Department. Two large cans of apples as used in the confectionery trade were examined and the opinion was expressed upon one of them that while the contents were still fit for immediate consumption, the can as a whole had probably reached the end of its keeping " life."

Black stains upon samples taken from sides of bacon were shown to consist of very fine particles of carbon whose origin could not be determined. No actually harmful substance was found.

Black streaks affecting several slices in a wrapped sliced loaf were found to be richer in oil and in iron than unstained parts of the slices. Results of analysis were:—

	Stained portion per cent.	*Unstained portion per cent.*
Iron (Fe)	1·0	0·01
Oil	4·7	1·9
Unsaponifiable matter	2·3	Nil

The black material was seen microscopically to have the general structure of bread, but with some very finely divided black matter intimately admixed with it. The opinion was expressed that the streaks were caused by dark coloured oily matter from a machine bearing.

(*c*) Housing Department. A sample of ground water from a housing site was examined and an opinion was given as to its probable action on cement.

Samples from other sources

(*a*) Port of Manchester Health Authority. Specimens of imported foodstuffs were examined as follows: for injurious metallic impurities 5, for preservatives 2, for the presence of " oil taint " 6. Chemical analysis were made upon two samples of drinking-water from a ship. A solution of sodium monofluoracetate (rat poison) was tested in relation to a specification of strength.

(*b*) Private firms submitted specimens to be tested as follows: potato crisp for rodent excrement (result negative), wine for identification of crystalline sediment (calcium tartrate), two hide powders for valuation as fertilizers.

(*c*) Private individuals submitted specimens to be tested as follows: custard powder for cause of lumps (domestic mishap), wine for presence of taint due to detergent (result positive), " buttered " bread for examination of nature of fat (fat contained 45 per cent. butter fat), bread for stain, orange squash cordial for strength. A living insect found upon a meat pie, and submitted because the consumer of the pie had become alarmed on seeing the insect, was identified by Mr. S. Shaw, of the Department of Entomology, Manchester Museum, as a larva of the lacewing fly. The larva lives by preying upon the common greenfly, and the presence of the insect upon the pie must have been the result of mere chance.

Chemical examinations for H.M. Coroner

Evidence was given at an inquest following the examination of human organs and their contents. A quantity of a barbitone drug was found, and the coroner returned a verdict in which he attributed death to the effects of barbitone poisoning.

Measurement of atmospheric pollution

As a long-term contribution to the investigation of atmospheric pollution on a national scale, the Corporation of Manchester (in addition to making an annual monetary grant) maintains eight atmospheric deposit gauges, three lead peroxide instruments and one volumetric smoke and sulphur dioxide apparatus, and provides services of laboratory and staff for operating the apparatus and for calculating and reporting results. In short, the Corporation is a " co-operating body," and other co-operating bodies provide some or all of these services in their respective areas.

The broader aspects are under the supervision of the Atmospheric Pollution Committee of the Fuel Research Board, which is itself a part of the Department of Scientific and Industrial Research. Standard methods of procedure and analysis are followed, and results are reported to the Superintendent of Observations at the Fuel Research Station, Greenwich.

In December, a " Report on Observations in the 10 years ended 31st March, 1954," was published by H.M. Stationery Office under the heading, " The Investigation of Atmospheric Pollution." It is a reflection of the increased interest in atmospheric pollution that, during those 10 years the number of co-operating bodies rose from 77 to 222.

On the general trends over the 10 years it is difficult to make comments which are brief and at the same time fair. The Report discusses these trends and it may be said that no very great changes have been measured, but it appears that the solid deposit falling from the air has increased in amount, and that the deposit contains a higher proportion of ash and a lower proportion of combustible matter. There has been a tendency for the average suspended impurity (smoke), and for the average sulphur dioxide pollution, to fall over the 10 years. Very briefly, the annual consumption of coal has increased, and the average efficiency of combustion has improved somewhat.

The smog of 1955. About the middle of November the air over the City and the neighbourhood became stagnant and atmospheric pollution built up to a very high concentration. The conditions which lead to such a state of the air are now well known. Complete absence of wind for a period of days is quite rare in this country, but may be observed near the centre of a slow-moving anticyclone. The effect of fog and of temperature-inversion (in the air near the ground and up to a certain level, as is usually the case in fogs) is to trap the smoke from the whole neighbourhood and to form the characteristic mixture of fog and smoke which has been so philosophically endured from time to time since the beginning of the coal age.

No credit can be claimed for any " records " in this field of human activity. But very many people at the time were anxious to know how the pollution compared with that reported in the now famous London smog of December, 1952. It may be said in general terms that the sulphur dioxide pollution (Manchester, 1955) reached about the same level (as London, 1952), and that the smoke concentration (Manchester, 1955) attained very roughly four-fifths of that recorded (London, 1952).

Only a very slight drift in the air is necessary to cause a considerable reduction in the degree of pollution. It is extremely likely that if such a drift had not begun on the 18th of November, a very harmful concentration would have been maintained and a dangerous situation might have arisen within one or two days.

The measurements of smoke and sulphur dioxide pollution in the air, as performed daily in the laboratory for many years, became of vital importance as the pollution rapidly increased. The following table shows daily figures and weekly averages, and corresponding figures from previous years for comparison. A smog of less intensity and duration occurred on similar dates one year earlier (1954) so that a more fog-free period (in 1953) was also taken for comparison.

Abstract from volumetric smoke and sulphur dioxide figures

Rusholme

Daily mean concentration for 24 hours ending 11 a.m. on date stated.

1955					1954					1953				
ate Nov.	Smoke mg/m^3	Weekly average	SO$_2$ p.p.m.	Weekly average	Date Nov.	Smoke mg/m^3	Weekly average	SO$_2$ p.p.m.	Weekly average	Date Nov.	Smoke mg/m^3	Weekly average	SO$_2$ p.p.m.	Weekly average
7	0·21	0·22	0·059	0·073	8	0·45	0·23	0·133	0·088	9	0·25	0·19	0·095	0·074
8	0·19		0·049		9	0·20		0·087		10	0·28		0·129	
9	0·19		0·069		10	0·21		0·083		11	0·19		0·076	
10	0·19		0·070		11	0·20		0·089		12	0·10		0·031	
11	0·15		0·042		12	0·16		0·060		13	0·10		0·071	
12	0·20		0·064		13	0·19		0·070		14	0·23		0·062	
13	0·40		0·155		14	0·19		0·094		15	0·21		0·055	
14	0·21	1·22	0·117	0·539	15	0·80	0·66	0·274	0·231	16	0·20	0·29	0·056	0·118
15	0·28		0·157		16	0·75		0·244		17	0·37		0·174	
16	0·97		0·333		17	1·20		0·372		18	0·55		0·200	
17	1·25		0·675		18	0·83		0·282		19	0·28		0·130	
18	3·4*		1·30		19	0·56		0·222		20	0·29		0·114	
19	1·13		0·736		20	0·31		0·140		21	0·24		0·092	
20	1·28		0·454		21	0·20		0·086		22	0·11		0·058	
21	1·04	0·53	0·298	0·240	22	0·10	0·16	0·037	0·065	23	0·13	0·20	0·062	0·066
22	1·00		0·363		23	0·18		0·072		24	0·25		0·062	
23	0·42		0·239		24	0·21		0·106		25	0·21		0·077	
24	0·17		0·184		25	0·19		0·082		26	0·30		0·094	
25	0·36		0·224		26	0·26		0·090		27	0·07		0·032	
16	0·56		0·246		27	0·09		0·032		28	0·16		0·047	
27	0·18		0·126		28	0·10		0·036		29	0·29		0·090	

* The filter paper from which this result was obtained was sent to the Fuel Research Station, and the shade was measured by the Senior Experimental Officer, Atmospheric Pollution Section.

mg/m^3 = milligrams per cubic metre.

p.p.m. = parts per million.

Volumetric apparatus for sulphur dioxide and smoke

Rusholme

	Daily average sulphur dioxide—parts per million					Daily average smoke—milligrammes per cubic metre				
	1955	1954	1953	1952	1951	1955	1954	1953	1952	1951
January	0·140	0·183	0·211	0·169	0·144	0·330	0·422	0·488	0·393	0·368
February	0·133	0·159	0·153	0·203	0·086	0·225	0·327	0·326	0·442	0·230
March	0·147	0·115	0·197	0·111	0·120	0·313	0·242	0·447	0·251	0·302
April	0·099	0·105	0·089	0·103	0·062	0·193	0·221	0·180	0·208	0·228
May	0·066	0·078	0·063	0·074	0·042	0·133	0·222	0·130	0·206	0·209
June	0·048	0·049	0·068	0·067	0·028	0·090	0·151	0·159	0·167	0·171
July	0·055	0·054	0·029	0·060	0·039	0·118	0·180	0·075	0·126	0·158
August	0·044	0·057	0·046	0·052	0·046	0·129	0·225	0·123	0·161	0·164
September	0·069	0·054	0·062	0·092	0·062	0·175	0·195	0·185	0·269	0·213
October	0·125	0·066	0·134	0·106	0·092	0·279	0·192	0·389	0·312	0·319
November	0·234	0·129	0·088	0·182	0·101	0·543	0·349	0·241	0·539	0·214
December	0·141	0·098	0·139	0·183	0·113	0·299	0·251	0·363	0·422	0·290
Average daily figure over all year	0·11	0·10	0·11	0·12	0·08	0·23	0·25	0·26	0·29	0·24

The heaviest pollution for a single day occurred, of course, during the November smog. The date was the 18th, the concentration of sulphur dioxide was 1·30 parts per million, and the concentration of smoke was 3·4 milligrams per cubic metre.

The lightest sulphur dioxide pollution for a single day occurred on the 6th June, when the figure was 0·017 parts per million. The 5th June had the lowest smoke result, namely 0·033 milligrams per cubic metre.

D.S.I.R. lead peroxide instrument

Sulphur pollution expressed as milligrams SO_3 *per 100 square centimetres exposed surface per day. Results reduced to "Batch A" lead peroxide.**

	Monsall		Rusholme		Withington	
	1955	1954	**1955**	1954	**1955**	1954
January	4·7	5·0	2·8	3·6	2·2	2·4
February	4·2	5·0	3·1	3·5	2·3	2·8
March	3·7	4·1	3·1	2·3	2·1	1·8
April	3·5	2·9	1·7	2·2	1·2	1·3
May..	2·7	2·5	1·8	2·0	0·9	1·1
June	2·0	2·4	1·2	1·2	0·7	0·7
July	1·7	2·5	1·2	1·3	0·8	0·7
August	1·7	2·2	1·0	1·2	0·7	0·8
September	2·9	3·3	1·4	1·2	No record	0·8
October	3·7	4·8	2·4	1·6	1·4	1·0
November	5·8	5·0	3·5	2·5	2·7	1·8
December	4·9	4·6	2·8	2·3	1·8	1·4
Overall average	3·46	3·70	2·17	2·08	1·53	1·38

* In this table, results actually obtained in 1955 and 1954 with " Batch D " and " Batch E " lead peroxide have been multiplied by the factor 0·9 to allow for the smaller activity of the original " Batch A" lead peroxide.

Note.—In previous years this factor has not been applied on laboratory reports, but has been applied before figures appeared in the Atmospheric Pollution Bulletin.

D.S.I.R. lead peroxide instrument

Sulphur pollution expressed as milligrams SO_3 *per 100 square centimetres exposed surface per day. Results reduced to "Batch A" lead peroxide (louvered cover)*

S_5 = mean results May/September.
W_5 = mean results November/March.
Y_{12} = yearly mean April/March.

Station	Summer—S_5	Winter—W_5	Year—Y_{12}
	1955	1955–56	1955–56
Monsall	2·2	5·0	3·6
Rusholme	1·3	3·3	2·3
Withington	0·8	2·3	1·6

The above table is set out in the form adopted by the D.S.I.R. for this instrument.

D.S.I.R. deposit gauge
Tons of deposit per square mile

Monthly averages

Station	Rainfall (inches)		Insoluble matter		Soluble matter		Total solids	
	1955	1954	**1955**	1954	**1955**	1954	**1955**	1954
Baguley	2·0	3·6	4·42	8·77	4·91	7·18	9·33	15·95
Booth Hall	2·1	4·0	8·91	12·49	6·11	8·56	15·02	21·05
Heaton Park	2·3	4·0	5·84	6·73	5·08	7·66	10·92	14·39
Monsall..	1·9	3·7	9·91	10·72	6·53	9·98	16·44	20·70
Philips Park	1·9	3·8	24·88	23·91	8·00	13·16	32·88	37·07
Rusholme	2·0	3·9	12·49	12·87	7·85	9·50	20·34	22·37
Withington	1·9	3·5	12·03	10·23	5·67	7·48	17·70	17·71
Average for above gauges..	2·0	3·8	11·21	11·38	6·30	8·67	17·51	20·05
Knowle House* (Handforth)	2·0	3·5	3·34	5·31	3·95	5·85	7·29	11·16

* This station is situated in Cheshire, outside the City boundary, and is about eight miles south from the City centre. Results are recorded for comparison.

MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE

Honorary Secretary:—C. Metcalfe Brown, M.D., D.P.H., Barrister-at-Law

The Manchester and District Regional Smoke Abatement Committee is an advisory organisation of local authorities in South Lancashire and North Cheshire, covering an area of about 700 square miles. The Committee's assistance is available to member authorities for technical and other problems concerning all forms of atmospheric pollution.

The honorary secretary records with regret the death in December, 1955, of the Chairman of the Committee, Alderman T. M. Larrad, J.P., who was a representative of Manchester City Council on the Committee.

One meeting of the Executive Committee was held during the year and there were several meetings of associated technical committees and a special meeting of local authority officers.

The extensive observations on atmospheric pollution undertaken by the Committee through two joint schemes of participating authorities have been continued.

One authority ceased to participate in the scheme but arrangements were made for additional observations to commence in the areas of other authorities. At 31st March, 1956, the Regional Committee was maintaining observations in the areas of 35 local authorities, by means of 78 lead peroxide apparatus (for estimating sulphur dioxide) and 12 deposit gauges.

Co-operative schemes as operated by the Regional Smoke Abatement Committee have been recommended by the Committee on Air Pollution (the " Beaver Committee ") and the Department of Scientific and Industrial Research.

The Committee's officers have received many requests for advice and assistance during the period concerned.

The special problems which have caused difficulties to the local authorities and industrial undertakings included—cement dust, copper dust, dust with magnetic content, grit and dust from chemical works, sulphurous fumes from chemical works, pollution levels in the vicinity of a proposed power station.

The Committee has continued to maintain close relationship in research and other matters with the Department of Scientific and Industrial Research, the Fuel Research Board and other Government departments. It is also associated with the National Smoke Abatement Society as an Institution member.

The Assistant Secretary, Mr. C. A. Hay, M.B.E., was re-appointed during 1955 as Chairman of the Standing Conference of Co-operating Bodies on Atmospheric Pollution and a member of the Atmospheric Pollution Research Committee of the Fuel Research Board.

The number of member authorities is 79.

Investigation of atmospheric pollution—Carrington/Partington area

ESTIMATION OF SULPHUR DIOXIDE expressed as mgms. SO_3/day/100 cm^2 Batch A PbO_2 (louvered cover).

SITE	MEANS											
	Summer				Winter				Year			
	1948/1952	1953	1954	1955	1948/1953	1953/1954	1954/1955	1955/1956	1948/1953	1953/1954	1954/1955	1955/1956
Altrincham M.B.												
Wellington Road Secondary School	—	—	1·11	1·06	—	—	2·60	2·74	—	—	1·79	1·96
Oldfield Brow Primary School	—	—	1·17	1·08	—	—	2·62	2·67	—	—	1·85	2·01
Bowdon U.D.												
Towns Yard	—	—	0·65	0·56	—	—	1·76	1·66	—	—	1·05	1·15
Bucklow R.D.												
Ackers Farm	0·80	1·06	1·31	1·17	1·54	2·12	2·27	—	1·14	1·62	1·77	—
Moss Hall Farm	1·03	1·31	1·27	1·47	1·75	2·45	2·40	2·99	1·34	1·87	1·83	2·27
Green Lane Farm	0·68	0·82	0·74	0·71	1·40	1·91	1·84	2·09	0·99	1·36	1·27	1·43
Partington Gas Works	2·35	2·80	3·20	3·85	3·81	7·22	7·17	7·36	2·92	5·06	4·98	5·62
Bent Farm	0·63	0·58	0·64	0·64	1·25	1·50	1·66	1·71	0·89	1·02	1·11	1·21
Eccles M.B.												
Barton Airport	1·12	1·46	1·33	1·99	2·00	3·67	3·49	3·56	1·51	2·55	2·38	2·81
Sewage Works	—	—	1·78	2·37	—	4·80	4·30	4·22	—	—	2·97	3·32
Westwood Park	—	—	1·30	1·24	—	3·67	3·13	3·33	—	—	2·17	2·36
Hale U.D.												
Sewage Works	—	—	0·83	0·78	—	1·78	1·89	1·83	—	—	1·31	1·34
Irlam U.D.												
Princess Park	1·00	1·38	1·33	1·35	2·06	3·16	2·77	2·68	1·49	2·27	2·74	2·07
Railway View Farm	0·81	0·99	1·06	1·23	1·74	2·70	1·79	2·70	1·23	1·86	2·43	2·00
Sewage Works	0·92	1·12	1·16	1·24	1·55	2·47	2·54	2·32	1·20	1·78	1·78	1·80
Woodside Farm	0·61	0·76	0·80	0·87	1·21	2·05	1·91	2·00	0·88	1·41	1·33	1·47
Sale M.B.												
Grammar School	0·84	1·01	1·01	1·13	1·90	2·82	2·96	2·77	1·31	1·95	1·93	2·03
Highways Depot	0·86	1·12	1·21	1·11	2·04	2·70	2·48	2·82	1·38	1·93	1·82	2·01
Sewage Works	0·90	1·04	1·25	1·14	1·95	2·89	3·07	2·99	1·28	1·93	2·07	2·11
Stretford M.B.												
Victoria Park	1·01	1·19	1·45	1·24	2·22	3·33	3·33	3·53	1·55	2·26	2·34	2·45
Metrovick, Mosley Road ..	4·28	9·53	9·63	6·87	6·42	8·13	8·11	9·08	3·59	8·83	9·00	8·01
,, West Works.. ..	3·14	7·55	7·45	5·41	4·32	6·41	6·66	5·65	3·59	6·78	6·97	5·33
Urmston U.D.												
Bowfell Road	0·99	1·14	1·18	1·29	1·93	2·89	2·90	2·89	1·41	2·06	1·99	2·13
Irlam Road	0·68	0·74	0·65	0·96	1·57	2·13	2·19	2·31	1·08	1·44	1·49	1·68
Davyhulme Sewage Works ..	1·30	1·87	1·74	2·10	2·57	4·21	4·01	4·13	1·90	3·06	2·84	3·15
Westbourne Park	1·07	1·15	1·18	1·03	2·32	2·81	2·64	2·73	1·61	1·99	1·87	1·93
Barton Power Station	2·01	1·43	2·79	3·46	2·77	4·63	5·45	4·93	2·37	3·15	3·87	4·19
Means—all sites	1·29	1·90	1·83	1·83	2·30	3·43	3·26	3·37	1·65	2·67	2·55	2·61

ESTIMATION OF SULPHUR DIOXIDE expressed as mgms. SO_3/day/100 cm^2 Batch A PbO_2 (louvered cover)

SITE	MEAN RESULTS												
	Summer				Winter					Year			
	1952	1953	1954	1955	1951–1952	1952–1953	1953–1954	1954–1955	1955–1956	1952–1953	1953–1954	1954–1955	1955–1956
shton under Lyne M.B.													
Ambulance Depot, Lord Street..	—	—	2·32	1·88	—	—	—	4·35	4·83	—	—	3·30	2·52
Grasmere	—	—	1·62	1·46	—	—	—	2·66	2·62	—	—	2·12	2·04
Hartshead Pike	—	—	1·75	1·87	—	—	—	2·84	3·25	—	—	2·33	2·56
Jubilee Dingle	—	—	1·56	1·54	—	—	—	3·06	3·20	—	—	2·31	2·37
Limehurst Sewage Works	—	1·66	1·67	1·61	—	—	3·55	3·18	3·32	—	2·60	2·41	2·46
udenshaw U.D.													
Ryecroft Hall	1·00	1·48	1·63	1·51	2·31	2·14	2·81	2·79	2·89	1·44	2·12	2·19	2·20
hadderton U.D.													
132, Birch Lane	0·82	1·22	1·24	1·27	—	2·08	2·83	2·63	2·57	1·41	2·02	1·92	1·92
Grammar School	1·25	2·25	2·55	2·32	3·14	2·81	4·94	4·58	4·46	1·83	3·70	3·53	3·39
rompton U.D.													
Croft Bank	0·79	1·06	0·97	1·15	2·08	2·07	2·63	2·27	2·32	1·40	1·84	1·64	1·73
Home Farm	1·18	1·92	*1·66	1·97	2·42	2·22	3·38	2·92	3·04	1·60	2·63	2·47	2·50
enton U.D.													
Town Hall	1·05	1·33	1·34	1·43	2·23	2·19	2·58	2·63	2·80	1·52	1·96	1·99	2·11
Sewage Works	0·77	0·97	0·97	1·03	1·76	1·62	2·00	1·76	1·95	1·13	1·47	1·37	1·49
roylsden U.D.													
Cemetery	1·28	1·67	1·91	1·81	2·84	2·58	3·66	3·25	3·84	1·80	2·65	2·60	2·83
ukinfield M.B.													
Dukinfield Park	1·06	1·24	1·28	1·49	2·42	2·29	3·09	2·75	2·63	1·59	2·13	2·00	2·06
ailsworth U.D.													
Highways Depot	1·18	2·09	2·24	1·88	2·64	2·60	3·57	3·10	3·24	1·74	2·90	2·69	2·56
arnworth M.B.													
Sewage Works	—	1·94	1·61	1·79	—	—	3·77	3·11	3·03	—	2·60	2·34	2·41
Highways Depot	—	1·54	*2·12	2·40	—	—	4·56	4·53	4·75	—	3·41	3·41	3·57
eywood M.B.													
33, Hopwood Avenue	—	—	1·40	1·39	—	—	—	3·21	3·39	—	—	2·31	2·39
Queen Street Nursery	—	—	1·67	1·56	—	—	—	3·25	3·61	—	—	2·47	2·58
yde M.B.													
Birch House Yard	1·04	1·51	1·69	1·63	2·07	2·31	3·19	2·78	2·90	1·66	2·37	2·23	2·27
Reservoir	1·04	1·45	1·45	1·46	2·13	1·76	2·59	2·37	2·60	1·36	1·98	1·76	2·03
ees U.D.													
Cemetery	0·85	1·04	1·11	1·16	2·00	1·67	2·25	2·16	2·22	1·21	1·65	1·62	1·69
ittleborough U.D.													
Sewage Works	—	1·66	1·70	1·94	—	—	3·73	3·22	3·15	—	2·71	2·24	2·55
New Barn Farm	—	1·50	1·45	1·84	—	—	3·64	2·80	2·64	—	2·55	2·34	2·48
ittle Lever U.D.													
Cricket Ground	—	2·11	2·18	2·13	—	—	4·51	3·98	3·87	—	3·31	2·89	3·00
iddleton M.B.													
Town Hall	0·76	0·93	0·92	1·13	2·08	2·01	2·77	2·48	2·36	1·31	1·82	1·69	1·75
Thornham School	1·06	1·65	*1·68	*—	2·37	2·22	3·71	*—	*—	1·53	2·67	*—	*—
ilnrow U.D.													
Pumping Station	—	1·38	1·57	1·43	—	—	2·85	2·67	2·51	—	2·11	2·10	1·97
ossley M.B.													
Town Hall	0·84	1·14	1·17	1·12	1·66	1·82	2·31	2·05	2·10	1·25	1·74	1·60	1·61
Lower Hey Farm	1·07	1·20	1·50	1·50	2·15	1·93	2·21	2·19	2·36	1·42	1·77	1·87	2·01
ldham C.B.													
Haven Lane Day Nursery.. ..	1·01	1·37	*1·37	1·60	2·39	2·17	3·41	2·86	2·69	1·47	2·35	2·19	2·14
Horsedge Street Day Nursery ..	1·63	2·44	*2·72	2·51	3·74	3·40	5·00	5·20	(*a*) 5·30	2·33	3·76	3·82	(*b*) 3·90
Westhulme Hospital	1·23	1·86	1·97	2·02	3·14	2·68	3·95	3·82	3·81	1·86	2·85	2·91	2·92
Westlands	1·55	2·37	2·64	2·48	3·59	3·21	4·34	4·71	4·59	2·24	3·40	3·69	3·62
Alexandra Park	1·16	1·51	1·90	1·63	2·84	2·19	3·54	3·05	2·81	1·62	2·52	2·48	2·22
restwich M.B.													
Town's Yard	1·13	1·68	1·70	1·64	2·73	2·68	3·74	3·37	3·32	1·77	2·71	2·51	2·48
Sewage Works	1·30	2·26	2·27	2·05	2·98	2·48	3·78	3·63	3·43	1·77	3·02	2·96	2·74

SITE	Mean Results												
	Summer				Winter					Year			
	1952	1953	1954	1955	1951–1952	1952–1953	1953–1954	1954–1955	1955–1956	1952–1953	1953–1954	1954–1955	1955–1956
Radcliffe M.B.													
Secondary School	—	1·88	1·96	2·01	—	—	4·19	4·04	4·02	—	3·04	3·01	3·04
Close Park	—	1·40	1·64	1·24	—	—	3·34	2·95	2·75	—	2·37	2·32	2·00
Ramsbottom U.D.													
Cemetery	—	—	*0·93	1·08	—	—	—	2·28	2·38	—	—	—	1·73
Cricket Ground	—	—	0·66	1·02	—	—	—	2·50	2·36	—	—	—	1·69
Royton U.D.													
Hanging Chadder Farm	1·02	1·93	1·98	1·49	2·58	2·66	4·23	*3·60	3·64	1·64	3·08	2·71	2·56
Royton Park	1·03	1·51	1·61	1·63	2·61	2·06	3·39	3·15	3·06	1·47	2·44	2·53	2·34
Stalybridge M.B.													
Market Ground	1·24	1·74	1·99	1·92	2·54	2·25	3·15	3·05	3·46	1·65	2·49	2·52	2·69
Oakfield	1·11	1·88	2·04	1·81	2·39	2·05	3·13	2·74	3·07	1·51	2·48	2·27	2·44
Swinton and Pendlebury M.B.													
Moorside Park	1·04	1·58	1·51	1·59	2·41	2·38	3·96	3·23	3·24	1·60	2·76	2·34	2·41
Victoria Park	1·22	1·74	1·81	1·88	2·93	2·79	4·15	3·75	3·86	1·92	2·99	2·75	2·87
Whitefield U.D.													
Cricket Ground	0·77	1·13	0·92	1·12	1·70	1·78	2·48	2·61	2·42	1·19	1·79	1·71	1·77
Sewage Works	1·04	1·49	1·62	1·46	2·22	2·01	3·33	2·69	(c) 2·76	1·43	2·37	2·13	(d) 1·90
Whitworth U.D.													
Cemetery	—	1·03	0·97	1·18	—	—	2·24	2·05	2·13	—	1·64	1·56	1·65

* Apparatus damaged during period due to unauthorised interference.

(*a*) 4 months ; (*b*) 8 months ; (*c*) 5 months ; (*d*) 11 months.

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